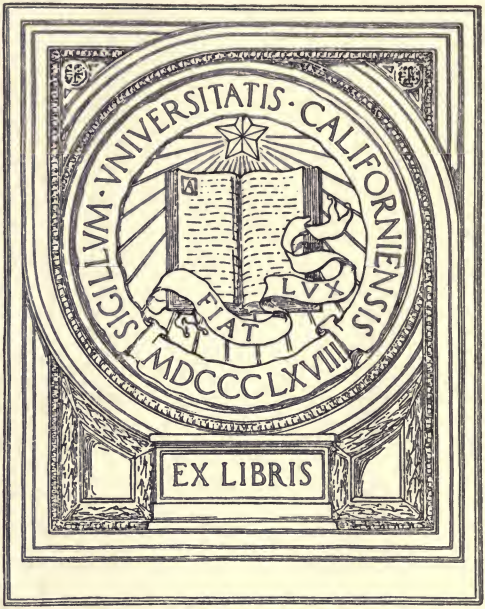
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ON EDUCATION.

PART II.

THE YOUNG CHYMIST.

Published Febr 1807, by George Nicholson.

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NATURAL PHILOSOPHY

is commonly defined to be that art or science which considers the powers and properties of natural bodies, and their mutual actions on each other. MORAL PHILOSOPHY relates to whatever concerns the *mind* and *intellect;* NATURAL PHILOSOPHY, on the other hand, is only concerned with the *materal* part of the creation. The MORALIST's business is to enquire into the nature of virtue, the causes and effects of vice, to propose remedies for it, and to point out the mode of attaining happiness. The NATURALIST, on the contrary, has nothing to do with spirit; his business is confined to body or matter. The first and principal part of this science is to collect all the manifest and sensible appearances of things, and reduce them into a body of Natural History. Natural Philosophy differs from Natural History in it's appropriated sense; the business of the latter is only to observe the appearances of natural bodies separately, and from these appearances to class them with other bodies to which they are allied. Natural Philosophy goes farther, and recites the action of two or more bodies upon each other; and tho' it can neither investigate nor point out the causes of those effects, whatever they be, yet from mathematical reasoning combined with experience, it can be demonstrated, that in such circumstances such effects must always take place. Natural Philosophy, till lately, has been divided into four parts, commonly called the FOUR BRANCHES, viz. 1, Mechanics; 2, Hydrostatics; 3, Optics; and 4, Astronomy; and these again subdivided into many parts. Modern discoveries have added, however, two more parts; viz., 1, Magnetism; and 2, Electricity and Galvanism.

M 3561

Every one is acquainted with the benefits derived from the sciences of MECHANICS, HYDROSTATICS, and HYDRAULICS; to which we are indebted for many useful inventions. Among these are wind and water-mills, aqueducts, pumps, fire-engines, steam-engines, &c. &c. In this department,

Ferguson's Exercises, 6*s.* bound;
Ferguson's Lectures on Mechanics, &c. by Brewster, 2 vol. 8vo, and a volume of Plates, 1*l* 1*s* in boards, and
Fletcher's Mechanics, 8vo, are easy pleasing works;
Hutton, 8vo, and Emerson, 4to, are more systematic;
Gregory's Treatise of Mechanics, theoretical, practical, and descriptive, in 2 vol. 8vo, with a volume containing 55 4to plates, 1*l* 16*s* in boards, (Kearsley) is the most modern and complete.

PNEUMATICS supply, even to a superficial enquirer, much instruction and amusement. Surely all are interested in the nature and properties of a fluid which is necessary to every moment of our existence.

How great would have been the surprise of the ancients, could they have conceived the effects which are now produced by the reflection and refraction of light! By a skilful management of these properties, TELESCOPES, and various optical instruments are constructed. Objects too remote to be perceived, by the naked eye, sre enlarged and rendered visible. The satellites of Jupiter and Saturn, the mountains and cavities in the moon, and the changes which take place on the sun's disc, are thus discovered, and afford subject for admiration and enquiry. Neither is the delightful science of OPTICS confined to the contemplation of distant objects. Minute animals, the vessels of plants, and, in short, a new world in miniature is disclosed to our view by the MICROSCOPE, and an inexhaustible fund of ra-

tional entertainment and knowledge is brought within the sphere of our senses.

On this Science, The Wonders of the Telescope; written in a familiar Manner, adapted to the perusal of Young Persons, and intended to simplify Astronomy among Persons of all Ages, with 12 plates, 8vo, 4*s* 6*d* is a good initiatory work. Kipling's Abridgment of Dr. Smith's work, is considered the best mathematical System. To which may be added Martin's Optics, 8vo. Dr. Priestley's History of Vision, Light, and Colours, 4to, 1*l* 11*s* 6*d*. Adams's Essays on the Microscope, 4to, 1*l* 6*s* bds. Sir Isaac Newton's Optics. Baker's edition of Hooke's Micrographia is a well-known valuable work. Adams's Essay on Vision, chiefly referrible to Defects in the Eyes, 8vo 3*s* 6*d* bds.; is interesting and valuable.

Of all the sciences to which geometry imparts the solidity of it's principles, and the clearness of it's proofs, the most beautiful and the most sublime is ASTRONOMY. This is perhaps the most exact and most definite part of natural philosophy: for it rectifies the errors of sight, with respect to the apparent motions of the planets; explains the just dimensions, relative distances, due order, and exact proportions of the spherical bodies, which compose the solar system. Nor is it even confined to these great objects of nature, since it opens the stupendous prospect of other suns, and other systems of planets, scattered over the boundless fields of space, and moving in obedience to their respective laws. It marks out their particular places, assigns their various names, and classes all the systems of worlds in their respective constellations. The calculations of astronomy prove the certainty of the future phenomena of the heavenly bodies, when the eccentric comet will reappear, after having traversed the most distant regions of the heavens or at what point of time the

bright luminaries of day and night will be immersed in the partial, or total darkness of an eclipse.

The most popular Works on Astronomy, are Stedman's, adapted to the Capacities of Youth, 2*s* 6*d* sewed. Dilly. Ewing's Practical Astronomy, 5*s* bds. Longman. In Mrs. Bryan's System of Astronomy, (8vo. 9s; large paper 14*s* bds.) the principles are elucidated without the aid of the mathematics. Professor Vince's Complete System of Astronomy, (2 vol. 4to, 2*l* 8*s* bds. Elmsley) is the most complete and scientific work of this class. To which should be added, Newton's Principia; which has been recommended to be read with the second volume of Vince's Astronomy. Olinthus Gregory's Treatise on Astronomy, (8vo, 550 pages and 9 plates, 15*s* bds. Kearsley) in which the elements of the science are demonstrated on mathematical principles, is intended to occupy an intermediate station, between those which give merely a concise view of the elements, and those which are voluminous and expensive. Dr. Long's Astronomy, (2 vol. 4to, 2*l* 2*s*) has always been referred to as an accurate, clear, and comprehensive work; but the author has entered little into the practice of the science, either with respect to the management of instruments, and the methods of making observations, or of drawing the necessary consequences from them by computation. This has, however, been amply supplied since, in Vince's Practical Astronomy, 4to. 15*s* bds. Deighton, Frend's Evening Amusements, in which the various beautiful Appearances, to be observed every Evening in the Heavens, are described, has been published annually, at 3*s* bds, and affords much rational recreation and improvement.

The works of Mercator, Whiston, Keil, Long, Ferguson, Leadbetter, Dunthorpe, Hodson, Costard, Bonnycastle, &c. are not adapted to the present maturity of the science.

CHEMISTRY.

As soon as man begins to think and to reason, the different objects which surround him on all sides naturally engage his attention. After being astonished at the wonders of the atmospheric and higher regions,

he cannot fail to be struck with the number, diversity, and beauty of those on the earth, and naturally feels a desire to be better acquainted with their properties and uses. If he reflect, also, that he himself is altogether dependent on these objects, not merely for his pleasures and comforts, but for his very existence, this desire must become irresistible. Hence that curiosity, that eager thirst for knowledge, which animates and distinguishes generous minds.

As a science, chemistry is intimately connected with all the phenomena of nature; the causes of rain, snow, hail, dew, wind, earthquakes; even the changes of the seasons can never be explored with any chance of success while we are ignorant of chemistry: and the vegetation of plants, and some of the most important functions of animals, have received all their illustration from the same source. No study can give us more exalted ideas of the wisdom and goodness of the eternal cause than this. As an art, it is intimately connected with all our manufactures: the glass-blower, the potter, the smith, and every other worker in metals; the tanner, the soap-maker, the dyer, the bleacher, are practical chymists; and the most essential improvements have been introduced into all these arts by the progress which chemistry has made as a science. Agriculture can only be improved rationally, and certainly, by calling in the assistance of chemistry; and the advantages, which medicine has derived from the same source, are too obvious to be pointed out. [Thomson's Chemistry.]

Henry's Epitome of Chemistry, small 8vo. *5s* 6*d*. Part 1, is intended to facilitate to the student the acquisition of chemical knowledge, by minute instructions for the performance of experiments. Part 2, Directions for the an-

alysis of mineral waters, of earths and stones, of ores, of metals, and of mineral bodies in general. Part 3, Instructions for applying chemical tests and reagents to various useful purposes.

Pye's Chemical Nomenclature, for the Use of Students in Pharmacy, Druggists, Apothecaries, &c. 8vo. 1*l* 5*s*. Longman.

Parkinson's Chemical Pocket-Book, 12mo. 6*s* bds. Symonds.

Bishop Watson's Chemical Essays, 5 vol. 12mo.

Accum's System of Theoretic and Practical Chemistry, 2 vol. 8vo, 18*s* bds. Kearsley.

Murray's Elements of Chemistry, &c. 2 vol. 8vo. 12*s*, is a useful book pervious to the System of Fourcroy. He has pursued the classification of substances according to the order of their simplicity, and given a digested and perspicuous detail of all important facts concerning their chemical relations.

Dr. Thomson's Translation of Fourcroy's Chemistry, 3 vol. 8vo. 1*l* 11*s* 6*d*. bds.

Mr. W. Nicholson's Translation of Fourcroy's Chemistry, 10 vol. 8vo, and folio Tables, 5*l* 5*s* bds.

Fourcroy'sSynoptic Tables of Chemistry, by Mr. Nicholson, folio 1*l* 1*s* bds. Cadell.

Dr. Thomson's System of Chemistry, 4 vol. 8vo, 2*l* 2*s* bds. Robinson.

Johnson's History of the Progress and present State of Animal Chemistry, 3 vol. 8vo. 1*l* 4*s* bds. Johnson. 1804.

Other useful and eminent Works on Natural Philosophy in general.

Elements of Natural Philosophy for Youth, 2*s*. Harris.

Rudiments of Reason, or the Young experimental Philosopher, 2 vol. 5*s* bds. Harris.

Elements of Natural Philosophy, explaining the Laws and Principles of Attraction, Gravitation, Mechanics, &c. &c. with a general View of the Solar System; adapted to public and private Instruction.

Webster's Elements of Natural Philosophy, 8vo. 6*s*. Johnson.

Euler's Letters to a German Princess, translated by Dr. Hunter, 2 vol. 8vo. 18*s* bds. Murray.

Rutherford's System of Natural Philosophy, 2 vol. 4to, 2*l* 2*s*.

Nicholson's Introduction to Natural Philosophy, 2 vol. 8vo, 16*s* bds. Johnson.

Enfield's Institutes of Natural and Experimental Philosophy, 1*l* 1*s* bds.
Gregory's Economy of Nature, 3 vol. 8vo, 1*l* 10*s* in calf. Johnson.
Adams's Lectures on Natural and Experimental Philosophy, by Jones, 5 vol. 8vo, 1*l* 12*s* bds. Jones.
Morgan's Lectures on Electricity, 2 vol. 12mo. 10*s* 6*d*. Johnson.
Adams's Electricity, 6*s* bds. Jones.
Carpue's Introduction to Electricity and Galvanism, 8vo. 112 pages. Longman.
Priestley's History of Electricity, 4to, 1*l* 1*s*. Johnson.
Pemberton's View of the Newtonian Philosophy, 4to, 10*s*.
Maclaurin's Account of Sir Isaac Newton's Philosophical Discoveries, 8vo. 1775, 6*s* bds.
Newton's Principia; or the Mathematical Principles of Natural Philosophy, translated by A. Motte, revised by W. Davis, 3 vol. 8vo. 1*l* 7*s* bds. Baynes.
Hutton's Translation of Montucla's Edition of Ozanam's Recreations, 4 vol. 8vo, 3*l* 4*s* bds. Kearsley.

NATURAL HISTORY.

I am convinced, that at all times of life, the study of nature abates the taste for frivolous amusements, prevents the tumult of the passions, and provides the mind with a nourishment which is salutary, by filling it with objects most worthy of it's contemplation. [Rousseau.] Of all the studies, in which the minds of youth may be employed, none, perhaps, deserve more strongly to be recommended, than those of natural history and physics. The objects on which they are occupied being such as come under the cognizance of our senses, they are more easily comprehended by the juvenile understanding, than the refinements of grammar, or the abstract ideas of moral philosophy: at the same time, they afford an inexhaustible fund of entertainment; and their great utility in every situation in life is universally acknowledged. [Preface to Pleasing Preceptor.]

It is the glorious privilege of man, while other animals are confined within the limits which instinct has prescribed, to carry his observations beyond his own immediate wants, and to contemplate the universe at large. He extends his enquiries to all the objects which surround him; exercises his judgment, and informs his understanding, by ascertaining their nature, properties, and uses. In the various branches of the mathematics, in the abstract speculations of metaphysics, or in searching the records of history, he is solely intent on the operations of his own mind, or the actions of himself and his fellow creatures: but in the study of nature, he examines every object presented to his senses, and takes a general survey of the wide and interesting prospects of the creation. The earth he treads, the ocean he crosses, the air he breathes, the starry heavens on which he gazes, the mines and caverns he explores, all present to him abundant materials for his researches. And, when thus employed, he is engaged in a manner peculiarly suitable to his faculties, since he alone is capable of knowledge, he alone is distinguished by the power of admiration, and exalted by the faculty of reason. The terraqueous globe presents a most glorious and most sublime prospect, equally worthy of the capacity of man to contemplate, and beautiful to his eye to behold. And the treasures of nature, which this prospect comprehends, are so rich and inexhaustible, that they may furnish employment for his greatest diligence, stimulated by the most ardent curiosity, and assisted by the most favourable opportunities. At the same time that she solicits him to follow her, not only into her open walks, but likewise to explore her secret recesses, she fails not to reward

him with the purest gratifications of the mind, because at every step he takes, new instances of beauty, variety, and perfection are unfolded to his view. The study of the works of nature is in itself capable of affording the most refined pleasure, and the most edyfying instruction. All the objects with which we are surrounded, the smallest as well as the greatest, teach us some useful lesson. All of them speak a language directed to man, and to man alone. Their evident tendency to some determined end, marks the design of a great Creator. The volume of creation contains the objects of arts, science, and philosophy, and is open to the inspection of all the inhabitants of the globe. Nature speaks by her works an universal language, the rudiments of which are peculiarly adapted to the inclination and capacity of the young, whose curiosity may be gratified and excited by turns: but more profound and extensive inquiries are suitable to the contemplation of persons of every age; and no subject can be more worthy of their attentive observation. [Mr. Kett's Elements.]

A walk in the fields, after reading a little in natural history, may furnish opportunities of important instruction. The hills, the dales, and quarries afford matter of speculation on their formation, use, and beauty. And this may be rendered intelligible to a child, by a person who really understands the subject, and is not a mere pedant who has only committed technical words to memory. So in all probability may every branch of real knowledge. Those branches which are now lost to common sense by calculations and mathematical processes, are not always, if they be ever understood by those who profess to understand them. Every thing which is not

applicable to use, and the application of which cannot be made obvious to common sense, is gothic jargon, and not science; and people who glory in such acquisitions have not a clear and good idea of what constitutes real knowledge. This explains the problem, why, in the present state of learning, there are no plain, intelligible, and easy methods of teaching the sciences, and so few good elementary books. The reason is, that the sciences are not generally and thoroughly understood. Every man can easily teach another what he perfectly understands himself. But if half his terms be merely technical; and he can give no definitions of them which convey ideas; it is no wonder that learning is difficult, as it is always painful to commit to memory words which have no meaning; and all the progress made upon such foundations is ever attended with that anxiety and anguish, which have so strongly marked the countenances of our philosophers. In the same manner as the general truths of natural history might be occasionally exemplified in the fields, many of the mathematic, astronomic, and particularly the mechanic problems, might be examined in a walk. This would not only be present instruction, but bring the pupil into a habit of having an object and a view in every action. He would not then experience the common unhappiness of not knowing what to do with himself; or when he has determined on a walk or a ride, be miserable for want of being able to determine where to go, or with what object to engage his thoughts. [D. Williams.]

Natural History has an obvious tendency to awaken the mental faculties into successive exertion, and is calculated beyond all others to excite and gratify a reflecting mind. That this inviting

study may be facilitated; and that the whole of the productions and inhabitants of this our globe, may be arranged, and conveniently exhibited, systems have been invented, reducing them to their several kingdoms, classes, tribes, families, and individuals: with their names, habitations, manners, economy, and appearance. These have had their various degrees of repute and excellence; but the amazing comprehension, learning and labour of the celebrated SIR CHARLES LINNE, has produced a system so clear and simple, so compendious and accurate, that the investigator of nature may directly discover the name and the properties of whatever subject may fall in his way, or which he may have selected for examination. In systematic arrangement, the student has this peculiar advantage, that by readily arriving at the name, the whole of it's known qualities are immediately displayed: but without a systematic classification, he wanders in obscurity and uncertainty, and must collect the whole of it's habits and peculiarities, before he can ascertain the individual he is examining. The traveller, for example, who wishes to collect the more curious subjects of natural history, finds a bird, whose name, habits, and economy, he is desirous of investigating: from it's conic, sharp-pointed bill, slender legs, and divided toes, he finds that it belongs to the order Passeres; and from it's thick, strong, convex bill, with the lower mandible bent in at the edges, and the tongue abruptly cut off at the end, he refers it to the Genus Loxia or Grosbeak; and running over the specific differences, he immediately determines it, from it's exactly answering this character. "Body above brown, beneath yellowish white; crown and breast pale yellow; chin

brown," to be the Philippine Grosbeak *(Loxia Philippina);* a little bird which he finds is a native of the Philippine Islands, and endowed by nature with instinctive notions of preservation and comfort, nearly approaching to human intelligence: that it constructs a curious nest with the long fibres of plants or dried grass, and suspends it by a kind of cord, nearly half an ell long, from the end of a slender branch of a tree, that it may be inaccessable to snakes, and safe from the prying intrusion of the numerous monkeys which inhabit those regions: at the end of this cord is a gourd-shaped nest, divided into three apartments, the first of which is occupied by the male, the second by the female, and the third containing the young; and in the first apartment, where the male keeps watch while the female is hatching, is placed, on one side, a little tough clay, and on the top of this clay is fixed a glow-worm to afford it's inhabitants light in the night time. That the English student may be possessed of this treasure, comprehending and illustrating all nature, through the three kingdoms of Animals, Vegetables, and Minerals; a translation has been published by Lackington and Co., from the last edition of the Systema Naturæ of Linné, by Gmelin, amended and enlarged by the improvements and discoveries of later naturalists, by Dr. Turton, in 6 vol. 8vo. 3l. 3s. [Prospectus.]

The most complete and best introductory work on Botany is Dr. Hull's Elements, 2 vol. 8vo. The best *Pocket* Linnean Arrangement of Plants is the British Flora, by the same author, in one volume, price 8*s* 6*d* bds. The most complete botanical arrangement of plants is by Dr. Smith in the Latin language, called Flora Britannica, 4 vol. 8vo, 2*l* 2*s* bds. The cheapest and best figures of plants, may be found in Sowerby's English Botany,

published in monthly numbers, price 5*s*. each; the 175th appeared in June 1806. Professor Martyn's translation of Rousseau's "Letters on the Elements of Botany, addressed to a Lady," with 24 additional Letters, and a volume of 38 plates, is a most pleasing and familiar introduction. Dr. Withering's Arrangement of British Plants, 4 vol. 8vo. 1*l* 11*s* 6*d* bds. notwithstanding the singularity of the language, contains many original remarks. Professor Martyn's Language of Botany, is an excellent Dictionary of Terms, with familiar explanations small 8vo. 5*s* bds. Dr. Milne's Botanical Dictionary, is also a valuable work, on which the late Mr. Curtis, it is said, always placed his principal reliance in all cases of reference, and which Dr. Thornton uses as a text-book; a thick 8vo, 25 plates, 1*l* 1*s* bds.; coloured, 1*l* 15*s*. Symonds.

MINERALOGY.

The principles of the mineral kingdom, when compared with the known species of plants and animals, are few indeed: but they exist not in nature in their simple state; and their combinations present a senseless and perplexing variety of appearances, with such minute and almost imperceptible shades, that external characters cannot always be safely assumed as a basis of distinct classification; while a knowledge of their component parts, is, in many cases, to be acquired only by troublesome and difficult processes, and by modes of investigation not exempt from falacy. [Mon. Rev. N. S. xl. 535.]

The celebrated Prof. Werner has effected a revolution in this science. Mr. Jameson, author of the "Mineralogy of the Scottish Isles," is also author of "A Natural History of Fossils," according to the system of the professor of Freyburg. Mr. Jameson studied two years under this illustrious naturalist. The following may be mentioned as very valuable works.

A Practical Essay on the Analysis of Minerals, exemplifying the best Methods of analysing Ores, Earths, Stones, inflammable Fossils, and Mineral Substances in general, By Frederic Accum, 12mo. Clarke's Mineralogy; or, an easy and simple Method of arranging the Substances of the Mineral Kingdom, into Classes, Orders, Genera, Species, and Varieties, according to their Distribution on the Surface of the Globe. Jameson's System of Mineralogy; comprehending Oryctognosie, Geognosie, Mineralogical Geography, and Economical Mineralogy, 2 vol. 8vo, 1*l* 4*s* bds. Longman. Analytical Essays towards promoting the Chemical Knowledge of Mineral Substances. By Martin Henry Klaproth. From the German, 2 vol. 8vo. 12*s* bds. Cadell.

Other valuable works on the Subject of Natural History.

White's Naturalist's Calendar, 8vo, 176 pages; 1 plate, 6*s* bds. White. Stillingfleet's Miscellaneous Tracts relating to Natural History, &c. 8vo, 7*s*, Bewick's History of Quadrupeds, 8vo. 10*s* 6*d*, bds. Longman. Bewick's History of British Birds, 2 vol. 8vo. 1*l* 2*s* 6*d* bds. with incomparably fine Engravings on Wood. Buffon's Natural History, by Smellie, 9 vol. 8vo. 4*l* 1*s*. Buffon's Natural History, by Barr, 15 vol. 8vo, in bds. 5*l* 1*s* 6*d*; in 12mo, 3*l* 15*s*. Symonds. Dr. Shaw's General Zoology, or Systematic Natural History, with figures engraved principally by Heath; in thick 8vo. volumes, at 1*l* 12*s* 6*d* each, of which six had appeared the beginning of the year 1806. Kearsley. Dr. Shaw's Naturalist's Miscellany, with coloured Figures, the Descriptions in English and Latin. Publishing in Monthly Numbers. Dr Lettsom's Naturalist and Traveller's Companion, 8vo. 4*s* 6*d*. bds. Mawman. White's Works in Natural History, containing the History of Selborne; the Naturalist's Calendar, and Miscellaneous Observations, by W. Warwick, 2 vol. 8vo 14*s*. White.

SCIENCE IN GENERAL.

In electricity, chemistry, &c. my pupil begins by experiment, under the eye of a master, and thence either deduces his own general rules, or confirms

those of others. This is the order of nature, she presents us with facts, from which we must deduce our reasoning. This method of beginning with experiment has been most admirably illustrated, and enforced by Lavoisier in his Elements of Chemistry; see also his Preface. One advantage accruing from this practice must by no means be omitted, that the ardour of my pupil will thus be less liable to be repressed, or intimidated by scientific terms. Of all inventions, whose tendency is directly to retard the efforts of the mind, that of hard unmeaning names, holds indubitably the first rank. It deters thousands from scientific pursuits, it distracts the memory of the learned themselves, and hence checks their improvement. It gives encouragement to quackery in science, because a smattering of knowledge will have the appearance of something more perfect. "The word," as Lavoisier has well observed, "ought to produce the idea, and the idea to be a picture of the fact." I cannot sufficiently express my abhorrence of those preposterous appellations with which sciences are overburdened; nor do I think that any man of intellect can enlist in a better cause, or do more essential service to his fellow creatures, than to use his utmost endeavours to abolish them. Impressed fully with this persuasion, I published in the year 1796 the third of my "Triplet of Inventions," containing a new anatomical nomenclature, as far as related to the bones of the human frame; and this I did, tho' fully satisfied of my inability to do it *well*, in hopes that the efforts of some of my more able countrymen would be roused to greater exertions, as well in that, as in other sciences; my expectations are hitherto deceived, and it is left to chemistry

alone to claim her Morveau, her Bertholet, her Fourcroy, and her Lavoisier. [Northmore.]

Learning and science, or rather learned and scientific terms, when introduced out of season, become what is called PEDANTRY. The subject may have merit, the terms be precise, and yet, notwithstanding, the speaker be a pedant, if he talk without regard either to place or time. The following instance may illustrate this subject perhaps much more strikingly than an ellaborate disquisition. A learned doctor of Paris was once purchasing a pair of stockings, but unfortunately could find none which were either strong enough or thick enough. 'Give me,' said he to the hosier, 'stockings of matter *continuous*, not of matter *discrete*.' [Quoted from the Menagiana by Mr. Harris.] No province will admit of directing the pupil, without force, to such a number of objects fitted to occupy his time, employ his activity, and improve his strength or constitution, so well as natural history and natural philosophy. Do not be alarmed at the presumption of introducing children among the ostentatious philosophers of modern times: it is not the first occasion, in which you may observe philosophers deriving their fame from puerile employments. In order to give factitious dignity to natural history, it is obscured by a barbarous jargon, or by fanciful systems. These must be avoided in the instruction of children; and the distinctions, properties, or uses of objects, be associated merely with their names, to answer the purposes of a rational education. [Williams's Lectures on Education.] The object of all science and philosophy being utility, we are possessed of an excellent criterion, by which we may judge of all

works of this description. After having read a book professedly scientific or philosophical, if we ask ourselves this plain simple question, "cui bono?" what use can be made of it? we can hardly be deceived in ascertaining it's merits. This simple and easy mode of appreciating philosophical and scientific productions, has not yet become generally known; tho' nothing more deserves to be universally understood, and it's acquisition could not be attended with much difficulty. Mankind are, in general, disposed to be amused with trifles, and there is not wanting a sufficient quantity of good-natured authors who gratify their desire. Hence, every department of human enquiry, has been very abundant in trifles, in proportion as this abundance has been patronized and cultivated by mankind. Could the principles of Newton have been made an amusing trifle, to tickle weak and childish minds, it's study would have been much more popular. [Dr. Cowan.]

The best scientific work, for general reference, at a low price, is the Encyclopædia Perthensis, contained in twentytwo volumes at 15*s* each: the paper indeed is not fine, the printing not neat, nor the engravings elegant; but the work is compiled with care and ability, and is truly a book for *use*. Dr. G. Gregory's New and Complete Dictionary of Arts and Sciences, (to be completed in 12 parts at 9*s* each) by the exclusion of numerous articles not immediately connected with science, is expected to supply a luminous and valuable store of information. The English Encyclopædia, 10 vols. 4to, 15*l* bds, is a respectable work; the plates are numerous and well engraved. The opulent will undoubtedly prefer the new Edition of the Cyclopædia by Dr. Rees; now publishing in parts, at 18s. each; the execution of which, in paper, printing and engravings, far surpasses any dictionary ever published in England.

Or the 4th Edition of the Encyclopædia Britannica;

publishing in a superior style of embellishment, in half volumes, 15*s* each, to be completed in 20 vol:

To those who have not leisure to engage deeply in science, Imison's Elements of Science and Art 2 vols. 8vo, 1*l* 5*s* bds, will afford a valuable smattering.

GEOGRAPHY.

The two first objects of my pupil's GEOGRAPHIC STUDIES, should be the spot where he resides, and the residences of his distant acquaintance. After having well observed the situation of these, he should take the like notice of the neighbouring villages and country seats on the road, together with the adjacent rivers; observing the situation and aspect of each object, in regard to the rising and setting of the sun. This is the point of reunion. He should make a map from this survey; beginning simply with the two first objects before-mentioned, and inserting the others by degrees, as he comes to know or estimate their position and distance. His progress in the art of mapping will furnish new ornaments for his apartments. Before we begin to delineate our map, we must trace a meridian. The two points of intersection found by shadows of equal length in the morning and evening, will give an excellent meridian for an astronomer of thirteen. Let us suppose that while I am studying with my pupil the course of the sun and in what manner it appears to return to the east, he should stop me short by asking me, "To what purpose is all this?" What a florid discourse might I not make him, in answer to such a question? What a number of fine things might I not take occasion to expatiate on, by the way; particularly if there were any witnesses to our conversation. When I had done, however, I should only have been exposing my own pedantry, without

my pupil having comprehended one single thing I had been talking about. He would have still a great inclination to ask me, as before, to what end the sun returned to the east, but he would be fearful of offending. He would therefore find his account in pretending to understand what he was thus compelled to hear. This is the practice carried on in many popular seminaries. My pupil, however, brought up more impolitely, is so difficult of comprehension, that he would not listen to any thing like an elaborate discourse. At the first sentence, delivered in language he could not comprehend, he would begin to amuse himself with any thing which he might find in the room, and leave me to finish my oration myself. I must seek, therefore, some more obvious solution, such scientific method of solution being useless to him. In one of our excursions, I observed to my pupil that the forest was situated to the north from Montmorenci, when he interrupted me with his usual impertinent question, "To what end is such a remark?" You are in the right said I, if such a remark be not likely to be useful, it would have been better never to have made it, because we have no need of trifling. However, do not forget this remark, it is possible it may be worth remembering. Next morning, I propose to him a walk before breakfast. He loves the exercise of walking. We enter the forest, traverse the country, and rambling about till we are almost tired, we lose ourselves, and know not which way to return home. Our time is spent, the heat of the day increases; we begin to grow hungry, and wander about from one place to another, among copses, woods and quarries, without meeting with any object we are acquainted with. At

length overheated, famished, and fatigued, we find ourselves only more and more bewildered. We sit down, therefore, to rest ourselves, and deliberate on what is to be done. Supposing, my pupil, to have been educated in the ordinary way, he would not deliberate, but sit down and begin to weep. After some minutes passed in silence, I say to him "In what manner, my dear friend, shall we extricate ourselves from this forest?" *Pupil.* [In a violent perspiration, the tears trickling down his cheeks.] Indeed I do n't know; but I am weary, hungry, and so thirsty, that I know not what to do. *Rousseau.* Do you think that I am any better situated; or that I should not cry too, if I could breakfast upon tears? Our business is not to weep, but to look about us. Look at your watch; what is the hour? *Pu.* It is noon and I have not yet breakfasted. *Rous.* It is very true; it is noon and I am fasting too. *Pu.* You must then be very hungry? *Rous.* Yes, but the worst of it is my dinner will not come to me. Let us think. It is noon. That is precisely the time when yesterday we observed the situation of this forest from Montmorenci. If we could but observe, in like manner, the position of Montmorenci from this forest. *Pu.* True; but yesterday we saw the forest, and we cannot from hence see the town. *Rous.* That is our very misfortune. If we could, by any means, but find it's situation without seeing it. *Pu.* O, my good friend! but how? *Rous.* Did we not observe that the forest lay—— *Pu.* To the north of Montmorenci. *Rous.* Montmorenci should be—— *Pu.* To the south of the forest. *Rous.* We have a method then to find out the north at noon. *Pu.* We have, by the direction of our shadow.

Rous. But as for the south—— *Pu.* How shall we find that? *Rous.* Why the south is alway opposite to the north. *Pu.* That's true; we have only to take the direction contrary to our shadows. Here this way is to the south. Montmorenci must lie on this side. *Rous.* You are certainly in the right. *Pu.* [Clapping his hands and shouting for joy.] Ah! I see Montmorenci directly before us. Come, let us go to breakfast, to dinner, let us make haste.

You may be assured that my pupil will never forget this day's lesson; whereas had I only imagined this adventure in my chamber, all which I could have said on it, would have been forgotten the next day. For this reason we ought to inculcate all we possibly can by actions, and say only what we cannot do. [Rousseau.] Geography is a science so very easy and entertaining, and it's advantages so numerous and extensive, that it cannot fail to attract the attention, and to make a permanent impression on the minds of children. When this department of study is to be entered on, the tutor should explain by lecture and demonstration, the nature and use of the science: the structure of the earth, it's division, and the evidences of it's rotundity. When the pupils are perfected in this part of the science, that is, are able to trace the boundaries of the several kingdoms, states, and empires; to determine the situations of the principal towns and cities, the various divisions of land and water; the numerous islands, peninsulas and promontories; the seas, lakes, and rivers, as exhibited on the terrestrial globe, or laid down in accurate maps, they should be lectured on the artificial lines and distinctions, which have been invented by geographers, to carry on their systems.

A terrestrial globe should be placed before them, and the tutor should explain the two points or poles, on which the earth is supposed to perform her diurnal motion, as well as the meaning and application of the terms Equator, Meridians, Degrees, Minutes, Tropics, Polar Circles, Zones and Climates. When they have acquired the knowledge of the various divisions of the globe, and of it's inhabitants, as they are distinguished by their respective situations; they should then contemplate the whole world divided into two great continents; the eastern, comprehending Asia, Europe, and Africa; and the western, comprehending the two divisions of North and South America. 1, Asia, with it's various sovereignties, divisions, and subdivisions; their productions, religions, governments, laws, customs, manners, and population. 2 Europe, 3 Africa, 4 America, with their productions, &c. Their minds should be thus impressed with the nature, properties, and extent of the globe, and in their progress, such general principles should be unfolded, as can be easily comprehended; by such means, the memory will be exercised, curiosity awakened, and they will be taught, almost without perceiving it, the rudiments of the important sciences of politics, commerce, navigation, and history. It should be observed, that illustrations of geography may be drawn from sources of exquisite delight and extensive information. When the name of a place occurs in the course of their reading, it should never be passed over without exacting from the pupils, a rigid account, not only of it's situation, but of all those other circumstances which distinguish it; such as it's productions, manufactures, religion, government, laws, customs, manners, and

population. If their preceding geographic studies do not enable them to answer the different questions which may be proposed on this subject, the tutor should immediately take down from the library such a book as relates these particulars, and should make the pupils prepare themselves to give an account of their contents, at the next lesson. This practice is of infinite importance, and should be unceasingly repeated. It must be evident to every reader that this mode of studying geography, is far more comprehensive, than any thing of the sort now practised; for it embraces the knowledge of the origin of societies, and of the progress of man from barbarism to refinement. But it's uses will be rendered more apparent, if we reflect, that the generality of the scholars are, from their situations in life, precluded from any expectation of enlarging their education by distant travel. Few indeed have either inclination or opportunity to undertake expensive voyages; and of very few can it be said, that they have visited various regions;

> wand'ring from clime to clime, observant stray'd,
> their manners noted, and their states surveyed.

Indeed, all the ends of travel may be attained with greater safety, and nearly with equal advantage, by studying the influence of climate, government, and religion, in the narratives of the best travellers and navigators. If, therefore, the principles of geography be thoroughly understood by the pupils, and their further researches accompanied by this instructive method of illustration, I will venture to assert, that they will never while away in listless indolence, or vitious pursuits, their hours of relaxation, when they attain to years of maturity. On the contrary,

the pleasing sensations which these recitals have occasioned in infancy, will revive with tenfold ardour in maturity. A musing habit of contemplation will invigorate their faculties, and in contrasting the varied state of their fellow-creatures in opposite regions of the globe, the voluptuousness of the savage inhabitants of Otaheite, and the filth and wretchedness of the barbarous inhabitant of the frozen north, with the superior advantages of cultivated society, they will be able to perceive and to feel, the power of knowledge over the happiness of mankind. With the aid of cheerful lights, and by a good fire, they may navigate the world, even in winter, with *Cook*, *Wallis*, and *Vancouver*; or they may travel with *Sandys*, Abyssinian *Bruce*, and Athenian *Stuart*. With the assistance of *Charlevoix*, *Lafitau*, and *Carver*, they may penetrate forests as aged as the world itself, and they may traverse the vast plains, and wide expanded lakes of America. With *Scheffer*, with *Peyrere*, with *Lubin*, with *Acerbi*, they may step into the sledge of the LAPLANDER, and be alike surprised at the rapid fleetness of his rein-deer, and the placid satisfaction of his song, amid his mountains of ice and snow: or, in the six months' night of GREENLAND, they may contemplate the dance and the song of the imprisoned inhabitants, contented, and drinking the health of their mistresses in chargers of oil. Quitting those frozen regions, they may change the scene, and toil in imagination with *Lobo*, *Loyer*, and *Vailant*, in AFRICA, under the ardours of a burning sun; or transport themselves to the milder and luxuriant regions of ASIA and the EAST, with *Bernier*, with *Otter*, with *Chardin*; or with those admirable compilers Herbelot, and Du Halde. Pu-

pils should constantly recur to maps, whenever any place is mentioned, as they contribute both to amusement and instruction. After a little practice, they will be able not only to distinguish every place, but to describe it's peculiarities. [Chiefly from Mr. Kett's "Elements."] In the country, with the assistance of a common carpenter and a plasterer, a large globe of lath and plaster may be made for the instruction and entertainment of a numerous family of children. Upon this they should leisurely delineate from time to time, by their given latitudes and longitudes, such places as they become acquainted with in reading or conversation. The capital city, for instance, of the different countries of Europe, the rivers, and the neighbouring towns, till at last the outline might be added. [Mr. R. L. Edgeworth.]

Geography, tho' it includes a description of the situation of kingdoms, countries, and provinces; the rivers, mountains, forests, government, religion, and commerce; yet has frequently been divided into six parts; viz. Cosmography, which implies, a description of the world; Geography, of the earth; Hydrography, of the waters; Chorography, of countries; Topography, of places; and Astronomy, of the heavenly bodies. The dull manner in which TOPOGRAPHY, has been generally conducted, without one faint ray of imagination to illuminate the dreary paths of antiquity, has brought it into contempt with men of elegant learning and sympathizing minds. It cannot be denied, that to extract from court-rolls, deeds of feoffment, and parish registers; to copy tombstones, and epitomize wills, to hunt indexes for inquisitions, and transcribe meagre pedigrees of obscure names, is the very humble exercise of some of

the lowest qualifications of an attorney's clerk. But to elucidate local history in the manner in which it ought to be elucidated, is to rescue the worthy from oblivion, to delineate the changes of manners, and the progress of arts, and call back to the imagination the pomp and splendour of ages which are gone; to restore the ruinated castle; to repeople the deserted mansion, and bid, for a moment, the grave render back it's inhabitants to the fond eye of regret; to execute works of this kind would require powers very different from those of most of our Topographers, and not very compatible with that industry which the necessary researches would call for. Few men have united, with the powers of imagination and taste, such laborious investigation as the late Mr. THOMAS WHARTON. His *specimen of a History of Oxfordshire,* in his account of the parish of Kiddington, is a model of such compilations, and shews how instructive and entertaining he could have made the account of a more favoured spot. [Brydges' Censura Literaria.]

Numerous Outlines of Geography have been published at the prices of 1*s*, 1*s* 6*d*, and 2*s*,; Donne's Modern Geography, on a new Plan, 12mo, 3*s* sewed; Bullen's Elements of Geography, 12mo, 3*s* 6*d*. bound; Geography and History, by a Lady, 12mo, 4*s*. bound; Holland's System of Geography, with Examinations, 12mo, 2*s* 6*d*, bds; Newbery's Geography made easy to Children, 12mo 3*s*; are the best at low prices. The following are much esteemed works. Walker's Elements of Geography and of Natural and Civil History, 8vo, 6*s* bound; and his Universal Gazetteer, at 12*s*, bound, the Maps coloured 15*s*. The 4to Atlas may be had separately, coloured, 8*s* half-bound. Crutwell's Universal Gazetteer, 3 vol. 8vo, with a folio Atlas coloured, 2*l* 8*s* bds. Crosby. Morse's American Gazetteer, 9*s* 6d; coloured maps, 12*s*. bds. Crosby. An Atlas, with Blank Coun-

terparts; the Use of Maps, and Geographical Exercises, by Samuel Nicholson, 4to, 12*s*. Longman. Bruce's Use of the Globes, 12mo. Keith's Use of the Globes; with the Elementary Principles of Meteriology and Astronomy; the Theory of the Tides, &c. 12mo, 6*s* bound.

The most elegant and latest work on the Science of Geography is by Pinkerton, 2 vol. 4to, with beautifully engraved Maps, 4*l* 4*s* bds. Yet this work is very openly printed and has large margins: Double the quantity of reading might have been given at the price. There is an Abridgment in 8vo, price 12*s*, in boards. Pye's Dictionary of Ancient Geography, exhibiting the ancient Names of Places in Addition to the Modern, 8vo, 7*s* bds. Longman. Danville's Compendium of Ancient Geography, 2 vol. 8vo, 14*s* in Calf binding.

Barden's and Cary's Globes are held, at present, in the highest estimation.

The following Books of Topography, Travels, &c. may be enumerated, besides those already mentioned, as excellent Specimens of this species of writing.

Dr. Aikin's England delineated, with Outline Maps of the Counties, 7*s* bds. Johnson. Dr. Mavor's Historical Account of the most celebrated Voyages, Travels, and Discoveries, from the Time of Columbus, 25 vol. 18mo, 3*l* 15*s* sewed. Harris. Dr. Mavor's Abridgment of the Tours through Great Britain and Ireland, 6 vol 18mo, 18*s*; fine paper, 1*l* 4*s* sewed. Harris. The Beauties of England and Wales by J. Britton and E. W. Brayley, had reached the 50th No. at 2*s* 6*d*. each, in May 1806. Wendeborn's View of England toward the Close of the eighteenth Century, 2 vol. 8vo, 14*s*, Robinson. Coxe's Travels in Poland, Russia, Sweden, Denmark, and Switzerland, 5 vol. 8vo, 2*l* 5*s* bds. Cadell. Young's Travels in France, &c. 2 vol. 4to, 2*l* 2*s* bds. Richardsons. Brydone's Tour through Sicily and Malta, 2 vol. 8vo, 12*s*. Townsend's Journey through Spain, 3 vol. 8vo, 18*s* bds. Mawman. Hawksworth's Account of Southern Voyages, 4 vol. 8vo, 1*l* 8*s* bds. Keate's Account of the Pelew Islands, with a Supplement, 4to, 1*l* 11*s* 6*d* bds. In 8vo. 7*s*. Volney's Travels through Syria and Egypt, 2 vol. 8vo

16s. bds. Robinsons: Savary's Letters on Greece, 8vo, 7s bds. De Tott's Memoirs of the Turks and Tartars, 2 vol. 8vo, 14s. Edwards's History of the British West Indies, 3 vol. 8vo, 2l 2s. Stockdale.

TRAVELLING.

To obtain real knowledge, you must observe nature with your own eyes, and study mankind. But to gain this knowledge by travelling, it is not necessary that we should traverse the world. Whoever has seen ten Frenchmen, has beheld them all; and whoever has surveyed and compared the circumstances and manners of ten different nations, may be said to know mankind. To pretend that no advantages may be derived from travelling, because some of those who travel return home without having gained much real improvement, would be highly unreasonable. Young people who have had a bad education, and are sent on their travels without any person to direct or superintend their conduct, cannot be expected to improve by visiting foreign countries. But they whom nature has adorned with virtuous dispositions, who have been so fortunate as to receive a good education, and go abroad with a real design of improvement, cannot but return with an increase of virtue and wisdom. In this manner shall my pupil conduct his travels. To induce him to improve in the most attentive manner that time which he should spend in travelling, I would let him know, that as he had now attained an age, at which it might be proper for him to form some determination with regard to the plan of his future life, he ought, therefore, to look abroad into the world, to view the various orders in society, to examine the various circumstances of mankind, under different forms of government, and in different parts of the

globe; and to choose his country, his station, and his profession. With these views should my pupil set out on his travels; and with these views, in the course of our travels, we should inquire into the origin of society and government; into the nature of those principles by means of which men are united in a social state; into the various circumstances which have given rise to so many different forms of government and into the necessary relation between government and manners. Our stay in the great towns should be but short: for as in them corruption of manners has risen to a great height, and dissipation reigns, a long stay might be fatal to my pupil's dispositions.

Dean Ducker's Instructions for Travellers, 4to 1757. Berchtold's Essay to direct and extend the Enquiries of patriotic Travellers, &c. 2 vol, 8vo. 5*s* bds, 1789. Lackington.

Cary's Maps of the English Counties, 3*s* 6*d* each. Cary's Traveller's Companion, or a Delineation of the Turnpike-Roads in England and Wales, small 8vo. 15*s* half-bound English Atlas, on 46 plates, 6*l* 6*s* half-bound. Smith, 172, Strand. Smith's Map of South Wales, 2 sheets coloured, 7*s*; on Canvas 10*s*. Cary's General Atlas, in Nos. outlined, 7*s* 6*d*; full coloured, 9*s* each.

Kearsley's Traveller's Entertaining Guide through Great Britain, 8vo, 7*s* bds.

HISTORY.

Curiosity is one of the strongest and most active principles of human nature. Throughout the successive stages of life, it seeks with avidity for those gratifications, which are congenial with the different faculties of the mind. The child, as soon as the imagination begins to open, eagerly listens to the tales of his nurse: the youth, at a time of life, when the love of what is new and uncommon is quickened

by sensibility, is enchanted by the magic of romances and novels: the man, whose mature judgment inclines him to the pursuit of truth, applies to genuine history, which even in old age continues to be a favourite object of his attention; since his desire to be acquainted with the transactions of others has nearly an equal power over his mind with the propensity to relate what has happened to himself.

History, considered with respect to the nature of it's subjects, may be divided into *general* and *particular;* and with respect to time, into *ancient* and *modern.* Ancient history commences with the creation, and extends to the reign of Charlemagne, in the year of our Lord 800. Modern History beginning with that period, reaches down to the present times. General history relates to nations and public affairs, and may be subdivided into *sacred, ecclesiastical,* and *profane.* Biography, memoirs, and letters, constitute particular history. *Statistics* refer to the present condition of nations. GEOGRAPHY and CHRONOLOGY are important aids, and give order, regularity, and clearness to them all. To draw the line of proper distinction between authentic and fabulous history, is the first object of the discerning reader. Let him not burden his memory with events which ought perhaps to pass for fables; let him not fatigue his attention with the progress of empires, or the succession of kings, which are thrown back into the remotest ages. He will find that little dependence is to be placed upon the relations of those affairs in the Pagan world, which preceded the invention of letters, and were built upon mere oral tradition. Let him leave the dynasties of the Egyptian kings, the expeditions of Sesostris, Bacchus, and Jason,

and the exploits of Hercules and Theseus, for poets to embellish, or chronologists to arrange. The fabulous accounts of these heroes of antiquity may remind him of the sandy deserts, lofty mountains, and frozen oceans, which are laid down in the maps of the ancient geographers, to conceal their ignorance of remote countries. Let him hasten to firm ground, where he may safely stand, and behold the striking events, and memorable actions, which the light of authentic records displays to his view. They alone are amply sufficient to enrich his memory, and to point out to him well-attested examples of all that is magnanimous, as well as all that is vile; of all that debases, and all that ennobles mankind. [Mr. Kett's "Elements."] Unfortunately the study of history is not without it's dangers and inconveniences of various kinds. It is a very difficult matter to place one's-self in such a point of view, as to be able to judge equitably of our fellow creatures. It is one of the common vices of history to paint man in a disadvantageous rather than in a favourable light. Revolutions and fatal catastrophes being most interesting, so long as a people have continued to encrease and prosper in the calm of a peaceable government, history has remained silent; it speaks of nations, only when growing insupportable to themselves, they begin to interfere with their neighbours, or to suffer their neighbours to interfere with them. We are favoured with very exact accounts of those nations which verge towards destruction; but of those which have been flourishing, we have no history; they have been so wise and happy as to furnish no events worth recording. The historical relations of facts which we meet with, are by no means accurate delineations;

they change their aspect in the brain of the historian, they bend to his interest, and are tinctured by his prejudices. What historian ever brought his reader to the scene of action, and related the event circumstantially as it happened? Ignorance and partiality disguise every thing. How easy it is to give a thousand varied appearances to the same facts, merely by a difference in the representation of circumstances. Exhibit an object in different points of view, and we scarcely believe it to be the same, and yet nothing is changed, except the eye of the spectator. How often has it happened that a few trees, a hill on the right or left, or a sudden cloud of dust, have turned the scale of victory, without the cause being perceived? Nevertheless the historian will assign a reason for the victory or defeat with as much confidence as if he had been at the same instant in every part of the battle. The worst historians, for a young reader, are those who favour us with their judgment. A plain narrative of facts is all he wants; let him judge for himself, and he will learn to know mankind. If he be constantly guided by an author's opinion, he sees only with the eyes of another; and when these are taken from him he does not see at all. History is generally defective in recording only those facts which are rendered conspicuous by name, place, or date; but the slow progressive causes of those facts, not being thus distinguished, remain for ever unknown. A madness for partly having possession of them all, they never endeavour to see things as they really are, but as they best agree with their favourite hypotheses. [Rousseau, b. iv.] It is the business of history to distinguish between the miraculous and marvellous; to reject the first in all narra-

tions merely prophane and human; to scruple the second; and when obliged by undoubted testimony to admit of something extraordinary, to receive as little of it as is consistent with the known facts and circumstances. [Hume.] In undertaking a course of History, it is certainly of great advantage to follow the chronological order of events. You have then the gradual progress of man from barbarism to refinement; from refinement to corruption, venality, and slavery; from slavery back again to darkness and ignorance; and from this state again to knowledge, civilization, and liberty. The most ancient history, except the Bible, is HERODOTUS; and no history was ever more delightful for it's simplicity, perspicuity, the unaffected style of the narrative, and easy and harmonious flow of the language. Mr. Beloe's translation, tho' not elegant, partakes in some measure, of the simplicity of the original. The history of THUCIDYDES takes not so wide a scope as that of Herodotus, but the period which he describes is interesting, and his manner is incomparable. Smith's translation is tolerably good, and even that of Hobbes may be read without disgust. A more connected view of Ancient History may be learnt from ROLLIN. Our ANCIENT UNIVERSAL HISTORY is an excellent and elaborate compilation, but it is tedious, and the style is dry and inharmonious: it is a book therefore rather for reference than study. The indefatigable Dr. Mavor has produced an abridgment of this work, with additions, to the year 1802, in 25 vol. 18mo. 4*l*. 13*s*. 9*d*. bds. Of the Roman Historians there is a deplorable dearth of good translations. The order in which they may be read is LIVY, SALLUST, CÆSAR. The Epistles

of CICERO are chiefly historical: which are admirably translated by Mr. Melmoth. PLUTARCH'S LIVES should be read immediately after the Greek and Latin historians, or rather in conjunction with them: a good translation has been done by the brothers Langhorne. Of modern works, VERTOT'S Roman Revolutions, MONTESQUIEU'S Greatness and Decline of the Romans, and Dr. MIDDLETON'S incomparable Life of Cicero, may be read with the ancient historians. The last is a production of original genius, and yet comprises all which is most excellent in the writings of the great man whose life it narrates. The ANABASIS of XENOPHON, and the history of POLYBIUS, are most interesting and engaging books: of the latter there is a translation by Hampton. Of the English compilations which contain the history of the Roman commonwealth, FERGUSON'S is preferable to HOOK'S. SUETONIUS'S History of the Twelve Cæsars is an ill-written book, yet it contains facts which are not to be found in any other original author. TACITUS is a treasure, not merely on account of the historical matter which it contains, but for the mass of moral instruction which it conveys. Murphy's translation may be pronounced superior to Gordon's. After finishing Tacitus, we must, of necessity, have recourse to compilation. Mr. GIBBON takes up the subject where Tacitus left it, and certainly a nobler monument of genius was never erected, than the "Decline and Fall of the Roman Empire;" a narrative which extends to so modern a period, that a few books will serve to unite the chain of history with that of our own country. Dr. ROBERTSON'S Charles the fifth is perhaps the most perfect historical composition in the English language;

and Dr. WATSON's History is well connected with it; both of which relate to some of the most important events recorded in history, the reformation of religion, and the establishment of the Batavian republic. Mr. WRAXALL has filled up a chasm on the historical shelf, by his agreeable history of FEANCE; yet the student should not satisfy himself with that author's account of the age of Henry the great, but inspect for himself the interesting and unblemished pages of SULLY; and there are few scholars who will not find exquisite pleasure in the General History of the correct DE THOU. VERTOT's Revolutions of Sweden and of Portugal, are both of them animated narratives of important events. VOLTAIRE's Age of Louis the fourteenth and fifteenth, may be classed among original histories, tho' not of the first rank; his Charles the twelfth borders much on the romance. Dr. ROBERTSON's History of America is a much admired composition. After such a course of reading, the student will not be ill prepared for the history of his own country. HUME's History is a bad compilation. Hume is, moreover, the avowed enemy of the two principles which conduce most to the happiness of mankind; religion and liberty; and he who makes him the standard of his historical faith, will embrace innumerable errors, arising not merely from design but from negligence. As a general history, RAPIN's is preferable; and if the state papers be passed over, it will not be found more voluminous than Hume. Perhaps a better course of English historical reading would be to take Dr. HENRY's History for the early periods; from the conclusion of which he may proceed with Rapin to the date of Clarendon's history; and, for the affairs of Scotland,

alysis of mineral waters, of earths and stones, of ores, of metals, and of mineral bodies in general. Part 3, Instructions for applying chemical tests and reagents to various useful purposes.

Pye's Chemical Nomenclature, for the Use of Students in Pharmacy, Druggists, Apothecaries, &c. 8vo. 1*l* 5*s*. Longman.

Parkinson's Chemical Pocket-Book, 12mo. 6*s* bds. Symonds.

Bishop Watson's Chemical Essays, 5 vol. 12mo.

Accum's System of Theoretic and Practical Chemistry, 2 vol. 8vo, 18*s* bds. Kearsley.

Murray's Elements of Chemistry, &c. 2 vol. 8vo. 12*s*, is a useful book pervious to the System of Fourcroy. He has pursued the classification of substances according to the order of their simplicity, and given a digested and perspicuous detail of all important facts concerning their chemical relations.

Dr. Thomson's Translation of Fourcroy's Chemistry, 3 vol. 8vo. 1*l* 11*s* 6*d*. bds.

Mr. W. Nicholson's Translation of Fourcroy's Chemistry, 10 vol. 8vo, and folio Tables, 5*l* 5*s* bds.

Fourcroy's Synoptic Tables of Chemistry, by Mr. Nicholson, folio 1*l* 1*s* bds. Cadell.

Dr. Thomson's System of Chemistry, 4 vol. 8vo, 2*l* 2*s* bds. Robinson.

Johnson's History of the Progress and present State of Animal Chemistry, 3 vol. 8vo. 1*l* 4*s* bds. Johnson. 1804.

Other useful and eminent Works on Natural Philosophy in general.

Elements of Natural Philosophy for Youth, 2*s*. Harris.

Rudiments of Reason, or the Young experimental Philosopher, 2 vol. 5*s* bds. Harris.

Elements of Natural Philosophy, explaining the Laws and Principles of Attraction, Gravitation, Mechanics, &c. &c. with a general View of the Solar System; adapted to public and private Instruction.

Webster's Elements of Natural Philosophy, 8vo. 6*s*. Johnson.

Euler's Letters to a German Princess, translated by Dr. Hunter, 2 vol. 8vo. 18*s* bds. Murray.

Rutherford's System of Natural Philosophy, 2 vol. 4to, 2*l* 2*s*.

Nicholson's Introduction to Natural Philosophy, 2 vol. 8vo, 16*s* bds. Johnson.

Enfield's Institutes of Natural and Experimental Philosophy, 1*l* 1*s* bds.

Gregory's Economy of Nature, 3 vol. 8vo, 1*l* 10*s* in calf. Johnson.

Adams's Lectures on Natural and Experimental Philosophy, by Jones, 5 vol. 8vo, 1*l* 12*s* bds. Jones.

Morgan's Lectures on Electricity, 2 vol. 12mo. 10*s* 6*d*. Johnson.

Adams's Electricity, 6*s* bds. Jones.

Carpue's Introduction to Electricity and Galvanism, 8vo. 112 pages. Longman.

Priestley's History of Electricity, 4to, 1*l* 1*s*. Johnson.

Pemberton's View of the Newtonian Philosophy, 4to, 10*s*.

Maclaurin's Account of Sir Isaac Newton's Philosophical Discoveries, 8vo. 1775, 6*s* bds.

Newton's Principia; or the Mathematical Principles of Natural Philosophy, translated by A. Motte, revised by W. Davis, 3 vol. 8vo. 1*l* 7*s* bds. Baynes.

Hutton's Translation of Montucla's Edition of Ozanam's Recreations, 4 vol. 8vo, 3*l* 4*s* bds. Kearsley.

NATURAL HISTORY.

I am convinced, that at all times of life, the study of nature abates the taste for frivolous amusements, prevents the tumult of the passions, and provides the mind with a nourishment which is salutary, by filling it with objects most worthy of it's contemplation. [Rousseau.] Of all the studies, in which the minds of youth may be employed, none, perhaps, deserve more strongly to be recommended, than those of natural history and physics. The objects on which they are occupied being such as come under the cognizance of our senses, they are more easily comprehended by the juvenile understanding, than the refinements of grammar, or the abstract ideas of moral philosophy: at the same time, they afford an inexhaustible fund of entertainment; and their great utility in every situation in life is universally acknowledged. [Preface to Pleasing Preceptor.]

It is the glorious privilege of man, while other animals are confined within the limits which instinct has prescribed, to carry his observations beyond his own immediate wants, and to contemplate the universe at large. He extends his enquiries to all the objects which surround him; exercises his judgment, and informs his understanding, by ascertaining their nature, properties, and uses. In the various branches of the mathematics, in the abstract speculations of metaphysics, or in searching the records of history, he is solely intent on the operations of his own mind, or the actions of himself and his fellow creatures: but in the study of nature, he examines every object presented to his senses, and takes a general survey of the wide and interesting prospects of the creation. The earth he treads, the ocean he crosses, the air he breathes, the starry heavens on which he gazes, the mines and caverns he explores, all present to him abundant materials for his researches. And, when thus employed, he is engaged in a manner peculiarly suitable to his faculties, since he alone is capable of knowledge, he alone is distinguished by the power of admiration, and exalted by the faculty of reason. The terraqueous globe presents a most glorious and most sublime prospect, equally worthy of the capacity of man to contemplate, and beautiful to his eye to behold. And the treasures of nature, which this prospect comprehends, are so rich and inexhaustible, that they may furnish employment for his greatest diligence, stimulated by the most ardent curiosity, and assisted by the most favourable opportunities. At the same time that she solicits him to follow her, not only into her open walks, but likewise to explore her secret recesses, she fails not to reward

him with the purest gratifications of the mind, because at every step he takes, new instances of beauty, variety, and perfection are unfolded to his view. The study of the works of nature is in itself capable of affording the most refined pleasure, and the most edyfying instruction. All the objects with which we are surrounded, the smallest as well as the greatest, teach us some useful lesson. All of them speak a language directed to man, and to man alone. Their evident tendency to some determined end, marks the design of a great Creator. The volume of creation contains the objects of arts, science, and philosophy, and is open to the inspection of all the inhabitants of the globe. Nature speaks by her works an universal language, the rudiments of which are peculiarly adapted to the inclination and capacity of the young, whose curiosity may be gratified and excited by turns: but more profound and extensive inquiries are suitable to the contemplation of persons of every age; and no subject can be more worthy of their attentive observation. [Mr. Kett's Elements.]

A walk in the fields, after reading a little in natural history, may furnish opportunities of important instruction. The hills, the dales, and quarries afford matter of speculation on their formation, use, and beauty. And this may be rendered intelligible to a child, by a person who really understands the subject, and is not a mere pedant who has only committed technical words to memory. So in all probability may every branch of real knowledge. Those branches which are now lost to common sense by calculations and mathematical processes, are not always, if they be ever understood by those who profess to understand them. Every thing which is not

applicable to use, and the application of which cannot be made obvious to common sense, is gothic jargon, and not science; and people who glory in such acquisitions have not a clear and good idea of what constitutes real knowledge. This explains the problem, why, in the present state of learning, there are no plain, intelligible, and easy methods of teaching the sciences, and so few good elementary books. The reason is, that the sciences are not generally and thoroughly understood. Every man can easily teach another what he perfectly understands himself. But if half his terms be merely technical; and he can give no definitions of them which convey ideas; it is no wonder that learning is difficult, as it is always painful to commit to memory words which have no meaning; and all the progress made upon such foundations is ever attended with that anxiety and anguish, which have so strongly marked the countenances of our philosophers. In the same manner as the general truths of natural history might be occasionally exemplified in the fields, many of the mathematic, astronomic, and particularly the mechanic problems, might be examined in a walk. This would not only be present instruction, but bring the pupil into a habit of having an object and a view in every action. He would not then experience the common unhappiness of not knowing what to do with himself; or when he has determined on a walk or a ride, be miserable for want of being able to determine where to go, or with what object to engage his thoughts. [D. Williams.]

Natural History has an obvious tendency to awaken the mental faculties into successive exertion, and is calculated beyond all others to excite and gratify a reflecting mind. That this inviting

study may be facilitated; and that the whole of the productions and inhabitants of this our globe, may be arranged, and conveniently exhibited, systems have been invented, reducing them to their several kingdoms, classes, tribes, families, and individuals: with their names, habitations, manners, economy, and appearance. These have had their various degrees of repute and excellence; but the amazing comprehension, learning and labour of the celebrated SIR CHARLES LINNE, has produced a system so clear and simple, so compendious and accurate, that the investigator of nature may directly discover the name and the properties of whatever subject may fall in his way, or which he may have selected for examination. In systematic arrangement, the student has this peculiar advantage, that by readily arriving at the name, the whole of it's known qualities are immediately displayed: but without a systematic classification, he wanders in obscurity and uncertainty, and must collect the whole of it's habits and peculiarities, before he can ascertain the individual he is examining. The traveller, for example, who wishes to collect the more curious subjects of natural history, finds a bird, whose name, habits, and economy, he is desirous of investigating: from it's conic, sharp-pointed bill, slender legs, and divided toes, he finds that it belongs to the order Passeres; and from it's thick, strong, convex bill, with the lower mandible bent in at the edges, and the tongue abruptly cut off at the end, he refers it to the Genus Loxia or Grosbeak; and running over the specific differences, he immediately determines it, from it's exactly answering this character. "Body above brown, beneath yellowish white; crown and breast pale yellow; chin

brown," to be the Philippine Grosbeak *(Loxia Philippina);* a little bird which he finds is a native of the Philippine Islands, and endowed by nature with instinctive notions of preservation and comfort, nearly approaching to human intelligence: that it constructs a curious nest with the long fibres of plants or dried grass, and suspends it by a kind of cord, nearly half an ell long, from the end of a slender branch of a tree, that it may be inaccessable to snakes, and safe from the prying intrusion of the numerous monkeys which inhabit those regions: at the end of this cord is a gourd-shaped nest, divided into three apartments, the first of which is occupied by the male, the second by the female, and the third containing the young; and in the first apartment, where the male keeps watch while the female is hatching, is placed, on one side, a little tough clay, and on the top of this clay is fixed a glow-worm to afford it's inhabitants light in the night time. That the English student may be possessed of this treasure, comprehending and illustrating all nature, through the three kingdoms of Animals, Vegetables, and Minerals; a translation has been published by Lackington and Co., from the last edition of the Systema Naturæ of Linné, by Gmelin, amended and enlarged by the improvements and discoveries of later naturalists, by Dr. Turton, in 6 vol. 8vo. 3l. 3s. [Prospectus.]

The most complete and best introductory work on Botany is Dr. Hull's Elements, 2 vol. 8vo. The best *Pocket* Linnean Arrangement of Plants is the British Flora, by the same author, in one volume, price 8*s* 6*d* bds. The most complete botanical arrangement of plants is by Dr. Smith in the Latin language, called Flora Britannica, 4 vol. 8vo, 2*l* 2*s* bds. The cheapest and best figures of plants, may be found in Sowerby's English Botany,

published in monthly numbers, price 5*s*. each; the 175th appeared in June 1806. Professor Martyn's translation of Rousseau's "Letters on the Elements of Botany, addressed to a Lady," with 24 additional Letters, and a volume of 38 plates, is a most pleasing and familiar introduction. Dr. Withering's Arrangement of British Plants, 4 vol. 8vo. 1*l* 11*s* 6*d* bds. notwithstanding the singularity of the language, contains many original remarks. Professor Martyn's Language of Botany, is an excellent Dictionary of Terms, with familiar explanations small 8vo. 5*s* bds. Dr. Milne's Botanical Dictionary, is also a valuable work, on which the late Mr. Curtis, it is said, always placed his principal reliance in all cases of reference, and which Dr. Thornton uses as a text-book; a thick 8vo, 25 plates, 1*l* 1*s* bds.; coloured, 1*l* 15*s*. Symonds.

MINERALOGY.

The principles of the mineral kingdom, when compared with the known species of plants and animals, are few indeed: but they exist not in nature in their simple state; and their combinations present a senseless and perplexing variety of appearances, with such minute and almost imperceptible shades, that external characters cannot always be safely assumed as a basis of distinct classification; while a knowledge of their component parts, is, in many cases, to be acquired only by troublesome and difficult processes, and by modes of investigation not exempt from falacy. [Mon. Rev. N. S. xl. 535.]

The celebrated Prof. Werner has effected a revolution in this science. Mr. Jameson, author of the "Mineralogy of the Scottish Isles," is also author of "A Natural History of Fossils," according to the system of the professor of Freyburg. Mr. Jameson studied two years under this illustrious naturalist.

The following may be mentioned as very valuable works.

A Practical Essay on the Analysis of Minerals, exemplifying the best Methods of analysing Ores, Earths, Stones, inflammable Fossils, and Mineral Substances in general, By Frederic Accum, 12mo. Clarke's Mineralogy; or, an easy and simple Method of arranging the Substances of the Mineral Kingdom, into Classes, Orders, Genera, Species, and Varieties, according to their Distribution on the Surface of the Globe. Jameson's System of Mineralogy; comprehending Oryctognosie, Geognosie, Mineralogical Geography, and Economical Mineralogy, 2 vol. 8vo, 1*l* 4*s* bds. Longman. Analytical Essays towards promoting the Chemical Knowledge of Mineral Substances. By Martin Henry Klaproth. From the German, 2 vol. 8vo. 12*s* bds. Cadell.

Other valuable works on the Subject of Natural History.

White's Naturalist's Calendar, 8vo, 176 pages; 1 plate, 6*s* bds. White. Stillingfleet's Miscellaneous Tracts relating to Natural History, &c. 8vo, 7*s*, Bewick's History of Quadrupeds, 8vo. 10*s* 6*d*, bds. Longman. Bewick's History of British Birds, 2 vol. 8vo. 1*l* 2*s* 6*d* bds. with incomparably fine Engravings on Wood. Buffon's Natural History, by Smellie, 9 vol. 8vo. 4*l* 1*s*. Buffon's Natural History, by Barr, 15 vol. 8vo, in bds. 5*l* 1*s* 6*d*; in 12mo, 3*l* 15*s*. Symonds. Dr. Shaw's General Zoology, or Systematic Natural History, with figures engraved principally by Heath; in thick 8vo. volumes, at 1*l* 12*s* 6*d* each, of which six had appeared the beginning of the year 1806. Kearsley. Dr. Shaw's Naturalist's Miscellany, with coloured Figures, the Descriptions in English and Latin. Publishing in Monthly Numbers. Dr Lettsom's Naturalist and Traveller's Companion, 8vo. 4*s* 6*d*. bds. Mawman. White's Works in Natural History, containing the History of Selborne; the Naturalist's Calendar, and Miscellaneous Observations, by W. Warwick, 2 vol. 8vo 14*s*. White.

SCIENCE IN GENERAL.

In electricity, chemistry, &c. my pupil begins by experiment, under the eye of a master, and thence either deduces his own general rules, or confirms

those of others. This is the order of nature, she presents us with facts, from which we must deduce our reasoning. This method of beginning with experiment has been most admirably illustrated, and enforced by Lavoisier in his Elements of Chemistry; see also his Preface. One advantage accruing from this practice must by no means be omitted, that the ardour of my pupil will thus be less liable to be repressed, or intimidated by scientific terms. Of all inventions, whose tendency is directly to retard the efforts of the mind, that of hard unmeaning names, holds indubitably the first rank. It deters thousands from scientific pursuits, it distracts the memory of the learned themselves, and hence checks their improvement. It gives encouragement to quackery in science, because a smattering of knowledge will have the appearance of something more perfect. "The word," as Lavoisier has well observed, "ought to produce the idea, and the idea to be a picture of the fact." I cannot sufficiently express my abhorrence of those preposterous appellations with which sciences are overburdened; nor do I think that any man of intellect can enlist in a better cause, or do more essential service to his fellow creatures, than to use his utmost endeavours to abolish them. Impressed fully with this persuasion, I published in the year 1796 the third of my "Triplet of Inventions," containing a new anatomical nomenclature, as far as related to the bones of the human frame; and this I did, tho' fully satisfied of my inability to do it *well*, in hopes that the efforts of some of my more able countrymen would be roused to greater exertions, as well in that, as in other sciences; my expectations are hitherto deceived, and it is left to chemistry

alone to claim her Morveau, her Bertholet, her Fourcroy, and her Lavoisier. [Northmore.]

Learning and science, or rather learned and scientific terms, when introduced out of season, become what is called PEDANTRY. The subject may have merit, the terms be precise, and yet, notwithstanding, the speaker be a pedant, if he talk without regard either to place or time. The following instance may illustrate this subject perhaps much more strikingly than an ellaborate disquisition. A learned doctor of Paris was once purchasing a pair of stockings, but unfortunately could find none which were either strong enough or thick enough. 'Give me,' said he to the hosier, 'stockings of matter *continuous*, not of matter *discrete*.' [Quoted from the Menagiana by Mr. Harris.] No province will admit of directing the pupil, without force, to such a number of objects fitted to occupy his time, employ his activity, and improve his strength or constitution, so well as natural history and natural philosophy. Do not be alarmed at the presumption of introducing children among the ostentatious philosophers of modern times: it is not the first occasion, in which you may observe philosophers deriving their fame from puerile employments. In order to give factitious dignity to natural history, it is obscured by a barbarous jargon, or by fanciful systems. These must be avoided in the instruction of children; and the distinctions, properties, or uses of objects, be associated merely with their names, to answer the purposes of a rational education. [Williams's Lectures on Education.] The object of all science and philosophy being utility, we are possessed of an excellent criterion, by which we may judge of all

works of this description. After having read a book professedly scientific or philosophical, if we ask ourselves this plain simple question, "cui bono?" what use can be made of it? we can hardly be deceived in ascertaining it's merits. This simple and easy mode of appreciating philosophical and scientific productions, has not yet become generally known; tho' nothing more deserves to be universally understood, and it's acquisition could not be attended with much difficulty. Mankind are, in general, disposed to be amused with trifles, and there is not wanting a sufficient quantity of good-natured authors who gratify their desire. Hence, every department of human enquiry, has been very abundant in trifles, in proportion as this abundance has been patronized and cultivated by mankind. Could the principles of Newton have been made an amusing trifle, to tickle weak and childish minds, it's study would have been much more popular. [Dr. Cowan.]

The best scientific work, for general reference, at a low price, is the Encyclopædia Perthensis, contained in twentytwo volumes at 15*s* each: the paper indeed is not fine, the printing not neat, nor the engravings elegant; but the work is compiled with care and ability, and is truly a book for *use*. Dr. G. Gregory's New and Complete Dictionary of Arts and Sciences, (to be completed in 12 parts at 9*s* each) by the exclusion of numerous articles not immediately connected with science, is expected to supply a luminous and valuable store of information. The English Encyclopædia, 10 vols. 4to, 15*l* bds, is a respectable work; the plates are numerous and well engraved. The opulent will undoubtedly prefer the new Edition of the Cyclopædia by Dr. Rees; now publishing in parts, at 18s. each; the execution of which, in paper, printing and engravings, far surpasses any dictionary ever published in England.

Or the 4th Edition of the Encyclopædia Britannica,

publishing in a superior style of embellishment, in half volumes, 15*s* each, to be completed in 20 vol:

To those who have not leisure to engage deeply in science, Imison's Elements of Science and Art 2 vols. 8vo, 1*l* 5*s* bds, will afford a valuable smattering.

GEOGRAPHY.

The two first objects of my pupil's GEOGRAPHIC STUDIES, should be the spot where he resides, and the residences of his distant acquaintance. After having well observed the situation of these, he should take the like notice of the neighbouring villages and country seats on the road, together with the adjacent rivers; observing the situation and aspect of each object, in regard to the rising and setting of the sun. This is the point of reunion. He should make a map from this survey; beginning simply with the two first objects before-mentioned, and inserting the others by degrees, as he comes to know or estimate their position and distance. His progress in the art of mapping will furnish new ornaments for his apartments. Before we begin to delineate our map, we must trace a meridian. The two points of intersection found by shadows of equal length in the morning and evening, will give an excellent meridian for an astronomer of thirteen. Let us suppose that while I am studying with my pupil the course of the sun and in what manner it appears to return to the east, he should stop me short by asking me, "To what purpose is all this?" What a florid discourse might I not make him, in answer to such a question? What a number of fine things might I not take occasion to expatiate on, by the way; particularly if there were any witnesses to our conversation. When I had done, however, I should only have been exposing my own pedantry, without

my pupil having comprehended one single thing I had been talking about. He would have still a great inclination to ask me, as before, to what end the sun returned to the east, but he would be fearful of offending. He would therefore find his account in pretending to understand what he was thus compelled to hear. This is the practice carried on in many popular seminaries. My pupil, however, brought up more impolitely, is so difficult of comprehension, that he would not listen to any thing like an elaborate discourse. At the first sentence, delivered in language he could not comprehend, he would begin to amuse himself with any thing which he might find in the room, and leave me to finish my oration myself. I must seek, therefore, some more obvious solution, such scientific method of solution being useless to him. In one of our excursions, I observed to my pupil that the forest was situated to the north from Montmorenci, when he interrupted me with his usual impertinent question, "To what end is such a remark?" You are in the right said I, if such a remark be not likely to be useful, it would have been better never to have made it, because we have no need of trifling. However, do not forget this remark, it is possible it may be worth remembering. Next morning, I propose to him a walk before breakfast. He loves the exercise of walking. We enter the forest, traverse the country, and rambling about till we are almost tired, we lose ourselves, and know not which way to return home. Our time is spent, the heat of the day increases; we begin to grow hungry, and wander about from one place to another, among copses, woods and quarries, without meeting with any object we are acquainted with. At

dength overheated, famished, and fatigued, we find ourselves only more and more bewildered. We sit down, therefore, to rest ourselves, and deliberate on what is to be done. Supposing, my pupil, to have been educated in the ordinary way, he would not deliberate, but sit down and begin to weep. After some minutes passed in silence, I say to him "In what manner, my dear friend, shall we extricate ourselves from this forest?" *Pupil.* [In a violent perspiration, the tears trickling down his cheeks.] Indeed I do n't know; but I am weary, hungry, and so thirsty, that I know not what to do. *Rousseau.* Do you think that I am any better situated; or that I should not cry too, if I could breakfast upon tears? Our business is not to weep, but to look about us. Look at your watch; what is the hour? *Pu.* It is noon and I have not yet breakfasted. *Rous.* It is very true; it is noon and I am fasting too. *Pu.* You must then be very hungry? *Rous.* Yes, but the worst of it is my dinner will not come to me. Let us think. It is noon. That is precisely the time when yesterday we observed the situation of this forest from Montmorenci. If we could but observe, in like manner, the position of Montmorenci from this forest. *Pu.* True; but yesterday we saw the forest, and we cannot from hence see the town. *Rous.* That is our very misfortune. If we could, by any means, but find it's situation without seeing it. *Pu.* O, my good friend! but how? *Rous.* Did we not observe that the forest lay—— *Pu.* To the north of Montmorenci. *Rous.* Montmorenci should be—— *Pu.* To the south of the forest. *Rous.* We have a method then to find out the north at noon. *Pu.* We have, by the direction of our shadow.

Rous. But as for the south—— *Pu.* How shall we find that? *Rous.* Why the south is alway opposite to the north. *Pu.* That's true; we have only to take the direction contrary to our shadows. Here this way is to the south. Montmorenci must lie on this side. *Rous.* You are certainly in the right. *Pu.* [Clapping his hands and shouting for joy.] Ah! I see Montmorenci directly before us. Come, let us go to breakfast, to dinner, let us make haste.

You may be assured that my pupil will never forget this day's lesson; whereas had I only imagined this adventure in my chamber, all which I could have said on it, would have been forgotten the next day. For this reason we ought to inculcate all we possibly can by actions, and say only what we cannot do. [Rousseau.] Geography is a science so very easy and entertaining, and it's advantages so numerous and extensive, that it cannot fail to attract the attention, and to make a permanent impression on the minds of children. When this department of study is to be entered on, the tutor should explain by lecture and demonstration, the nature and use of the science: the structure of the earth, it's division, and the evidences of it's rotundity. When the pupils are perfected in this part of the science, that is, are able to trace the boundaries of the several kingdoms, states, and empires; to determine the situations of the principal towns and cities, the various divisions of land and water; the numerous islands, peninsulas and promontories; the seas, lakes, and rivers, as exhibited on the terrestrial globe, or laid down in accurate maps, they should be lectured on the artificial lines and distinctions, which have been invented by geographers, to carry on their systems.

A terrestrial globe should be placed before them, and the tutor should explain the two points or poles, on which the earth is supposed to perform her diurnal motion, as well as the meaning and application of the terms Equator, Meridians, Degrees, Minutes, Tropics, Polar Circles, Zones and Climates. When they have acquired the knowledge of the various divisions of the globe, and of it's inhabitants, as they are distinguished by their respective situations; they should then contemplate the whole world divided into two great continents; the eastern, comprehending Asia, Europe, and Africa; and the western, comprehending the two divisions of North and South America. 1, Asia, with it's various sovereignties, divisions, and subdivisions; their productions, religions, governments, laws, customs, manners, and population. 2 Europe, 3 Africa, 4 America, with their productions, &c. Their minds should be thus impressed with the nature, properties, and extent of the globe, and in their progress, such general principles should be unfolded, as can be easily comprehended; by such means, the memory will be exercised, curiosity awakened, and they will be taught, almost without perceiving it, the rudiments of the important sciences of politics, commerce, navigation, and history. It should be observed, that illustrations of geography may be drawn from sources of exquisite delight and extensive information. When the name of a place occurs in the course of their reading, it should never be passed over without exacting from the pupils, a rigid account, not only of it's situation, but of all those other circumstances which distinguish it; such as it's productions, manufactures, religion, government, laws, customs, manners, and

population. If their preceding geographic studies do not enable them to answer the different questions which may be proposed on this subject, the tutor should immediately take down from the library such a book as relates these particulars, and should make the pupils prepare themselves to give an account of their contents, at the next lesson. This practice is of infinite importance, and should be unceasingly repeated. It must be evident to every reader that this mode of studying geography, is far more comprehensive, than any thing of the sort now practised; for it embraces the knowledge of the origin of societies, and of the progress of man from barbarism to refinement. But it's uses will be rendered more apparent, if we reflect, that the generality of the scholars are, from their situations in life, precluded from any expectation of enlarging their education by distant travel. Few indeed have either inclination or opportunity to undertake expensive voyages; and of very few can it be said, that they have visited various regions;

> wand'ring from clime to clime, observant stray'd,
> their manners noted, and their states surveyed.

Indeed, all the ends of travel may be attained with greater safety, and nearly with equal advantage, by studying the influence of climate, government, and religion, in the narratives of the best travellers and navigators. If, therefore, the principles of geography be thoroughly understood by the pupils, and their further researches accompanied by this instructive method of illustration, I will venture to assert, that they will never while away in listless indolence, or vitious pursuits, their hours of relaxation, when they attain to years of maturity. On the contrary,

the pleasing sensations which these recitals have occasioned in infancy, will revive with tenfold ardour in maturity. A musing habit of contemplation will invigorate their faculties, and in contrasting the varied state of their fellow-creatures in opposite regions of the globe, the voluptuousness of the savage inhabitants of Otaheite, and the filth and wretchedness of the barbarous inhabitant of the frozen north, with the superior advantages of cultivated society, they will be able to perceive and to feel, the power of knowledge over the happiness of mankind. With the aid of cheerful lights, and by a good fire, they may navigate the world, even in winter, with *Cook*, *Wallis*, and *Vancouver*; or they may travel with *Sandys*, Abyssinian *Bruce*, and Athenian *Stuart*. With the assistance of *Charlevoix*, *Lafitau*, and *Carver*, they may penetrate forests as aged as the world itself, and they may traverse the vast plains, and wide expanded lakes of America. With *Scheffer*, with *Peyrere*, with *Lubin*, with *Acerbi*, they may step into the sledge of the LAPLANDER, and be alike surprised at the rapid fleetness of his rein-deer, and the placid satisfaction of his song, amid his mountains of ice and snow: or, in the six months' night of GREENLAND, they may contemplate the dance and the song of the imprisoned inhabitants, contented, and drinking the health of their mistresses in chargers of oil. Quitting those frozen regions, they may change the scene, and toil in imagination with *Lobo*, *Loyer*, and *Vailant*, in AFRICA, under the ardours of a burning sun; or transport themselves to the milder and luxuriant regions of ASIA and the EAST, with *Bernier*, with *Otter*, with *Chardin*; or with those admirable compilers Herbelot, and Du Halde. Pu-

pils should constantly recur to maps, whenever any place is mentioned, as they contribute both to amusement and instruction. After a little practice, they will be able not only to distinguish every place, but to describe it's peculiarities. [Chiefly from Mr. Kett's "Elements."] In the country, with the assistance of a common carpenter and a plasterer, a large globe of lath and plaster may be made for the instruction and entertainment of a numerous family of children. Upon this they should leisurely delineate from time to time, by their given latitudes and longitudes, such places as they become acquainted with in reading or conversation. The capital city, for instance, of the different countries of Europe, the rivers, and the neighbouring towns, till at last the outline might be added. [Mr. R. L. Edgeworth.]

Geography, tho' it includes a description of the situation of kingdoms, countries, and provinces; the rivers, mountains, forests, government, religion, and commerce; yet has frequently been divided into six parts; viz. Cosmography, which implies, a description of the world; Geography, of the earth; Hydrography, of the waters; Chorography, of countries; Topography, of places; and Astronomy, of the heavenly bodies. The dull manner in which TOPOGRAPHY, has been generally conducted, without one faint ray of imagination to illuminate the dreary paths of antiquity, has brought it into contempt with men of elegant learning and sympathizing minds. It cannot be denied, that to extract from court-rolls, deeds of feoffment, and parish registers; to copy tombstones, and epitomize wills, to hunt indexes for inquisitions, and transcribe meagre pedigrees of obscure names, is the very humble exercise of some of

the lowest qualifications of an attorney's clerk. But to elucidate local history in the manner in which it ought to be elucidated, is to rescue the worthy from oblivion, to delineate the changes of manners, and the progress of arts, and call back to the imagination the pomp and splendour of ages which are gone; to restore the ruinated castle; to repeople the deserted mansion, and bid, for a moment, the grave render back it's inhabitants to the fond eye of regret; to execute works of this kind would require powers very different from those of most of our Topographers, and not very compatible with that industry which the necessary researches would call for. Few men have united, with the powers of imagination and taste, such laborious investigation as the late Mr. THOMAS WHARTON. His *specimen of a History of Oxfordshire,* in his account of the parish of Kiddington, is a model of such compilations, and shews how instructive and entertaining he could have made the account of a more favoured spot. [Brydges' Censura Literaria.]

Numerous Outlines of Geography have been published at the prices of 1*s*, 1*s* 6*d*, and 2*s*,; Donne's Modern Geography, on a new Plan, 12mo, 3*s* sewed; Bullen's Elements of Geography, 12mo, 3*s* 6*d*. bound; Geography and History, by a Lady, 12mo, 4*s*. bound; Holland's System of Geography, with Examinations, 12mo, 2*s* 6*d*, bds; Newbery's Geography made easy to Children, 12mo 3*s*; are the best at low prices. The following are much esteemed works. Walker's Elements of Geography and of Natural and Civil History, 8vo, 6*s* bound; and his Universal Gazetteer, at 12*s*, bound, the Maps coloured 15*s*. The 4to Atlas may be had separately, coloured, 8*s* half-bound. Crutwell's Universal Gazetteer, 3 vol. 8vo, with a folio Atlas coloured, 2*l* 8*s* bds. Crosby. Morse's American Gazetteer, 9*s* 6d; coloured maps, 12*s*. bds. Crosby. An Atlas, with Blank Coun-

terparts; the Use of Maps, and Geographical Exercises, by Samuel Nicholson, 4to, 12*s*. Longman. Bruce's Use of the Globes, 12mo. Keith's Use of the Globes; with the Elementary Principles of Meteriology and Astronomy; the Theory of the Tides, &c. 12mo, 6*s* bound.

The most elegant and latest work on the Science of Geography is by Pinkerton, 2 vol. 4to, with beautifully engraved Maps, 4*l* 4*s* bds. Yet this work is very openly printed and has large margins: Double the quantity of reading might have been given at the price. There is an Abridgment in 8vo, price 12*s*, in boards. Pye's Dictionary of Ancient Geography, exhibiting the ancient Names of Places in Addition to the Modern, 8vo, 7*s* bds. Longman. Danville's Compendium of Ancient Geography, 2 vol. 8vo, 14*s* in Calf binding.

Barden's and Cary's Globes are held, at present, in the highest estimation.

The following Books of Topography, Travels, &c. may be enumerated, besides those already mentioned, as excellent Specimens of this species of writing.

Dr. Aikin's England delineated, with Outline Maps of the Counties, 7*s* bds. Johnson. Dr. Mavor's Historical Account of the most celebrated Voyages, Travels, and Discoveries, from the Time of Columbus, 25 vol. 18mo, 3*l* 15*s* sewed. Harris. Dr. Mavor's Abridgment of the Tours through Great Britain and Ireland, 6 vol 18mo, 18*s*; fine paper, 1*l* 4*s* sewed. Harris. The Beauties of England and Wales by J. Britton and E. W. Brayley, had reached the 50th No. at 2*s* 6*d*. each, in May 1806. Wendeborn's View of England toward the Close of the eighteenth Century, 2 vol. 8vo, 14*s*, Robinson. Coxe's Travels in Poland, Russia, Sweden, Denmark, and Switzerland, 5 vol. 8vo, 2*l* 5*s* bds. Cadell. Young's Travels in France, &c. 2 vol. 4to, 2*l* 2*s* bds. Richardsons. Brydone's Tour through Sicily and Malta, 2 vol. 8vo, 12*s*. Townsend's Journey through Spain, 3 vol. 8vo, 18*s* bds. Mawman. Hawksworth's Account of Southern Voyages, 4 vol. 8vo, 1*l* 8*s* bds. Keate's Account of the Pelew Islands, with a Supplement, 4to, 1*l* 11*s* 6*d* bds. In 8vo. 7*s*. Volney's Travels through Syria and Egypt, 2 vol. 8vo

16s. bds. Robinsons: Savary's Letters on Greece, 8vo, 7s bds. De Tott's Memoirs of the Turks and Tartars, 2 vol. 8vo, 14s. Edwards's History of the British West Indies, 3 vol. 8vo, 2l 2s. Stockdale.

TRAVELLING.

To obtain real knowledge, you must observe nature with your own eyes, and study mankind. But to gain this knowledge by travelling, it is not necessary that we should traverse the world. Whoever has seen ten Frenchmen, has beheld them all; and whoever has surveyed and compared the circumstances and manners of ten different nations, may be said to know mankind. To pretend that no advantages may be derived from travelling, because some of those who travel return home without having gained much real improvement, would be highly unreasonable. Young people who have had a bad education, and are sent on their travels without any person to direct or superintend their conduct, cannot be expected to improve by visiting foreign countries. But they whom nature has adorned with virtuous dispositions, who have been so fortunate as to receive a good education, and go abroad with a real design of improvement, cannot but return with an increase of virtue and wisdom. In this manner shall my pupil conduct his travels. To induce him to improve in the most attentive manner that time which he should spend in travelling, I would let him know, that as he had now attained an age, at which it might be proper for him to form some determination with regard to the plan of his future life, he ought, therefore, to look abroad into the world, to view the various orders in society, to examine the various circumstances of mankind, under different forms of government, and in different parts of the

globe; and to choose his country, his station, and his profession. With these views should my pupil set out on his travels; and with these views, in the course of our travels, we should inquire into the origin of society and government; into the nature of those principles by means of which men are united in a social state; into the various circumstances which have given rise to so many different forms of government and into the necessary relation between government and manners. Our stay in the great towns should be but short: for as in them corruption of manners has risen to a great height, and dissipation reigns, a long stay might be fatal to my pupil's dispositions.

Dean Ducker's Instructions for Travellers, 4to 1757. Berchtold's Essay to direct and extend the Enquiries of patriotic Travellers, &c. 2 vol, 8vo. 5*s* bds, 1789. Lackington.

Cary's Maps of the English Counties, 3*s* 6*d* each. Cary's Traveller's Companion, or a Delineation of the Turnpike-Roads in England and Wales, small 8vo. 15*s* half-bound English Atlas, on 46 plates, 6*l* 6*s* half-bound. Smith, 172, Strand. Smith's Map of South Wales, 2 sheets coloured, 7*s*; on Canvas 10*s*. Cary's General Atlas, in Nos. outlined, 7*s* 6*d*; full coloured, 9*s* each.

Kearsley's Traveller's Entertaining Guide through Great Britain, 8vo, 7*s* bds.

HISTORY.

Curiosity is one of the strongest and most active principles of human nature. Throughout the successive stages of life, it seeks with avidity for those gratifications, which are congenial with the different faculties of the mind. The child, as soon as the imagination begins to open, eagerly listens to the tales of his nurse: the youth, at a time of life, when the love of what is new and uncommon is quickened

by sensibility, is enchanted by the magic of romances and novels: the man, whose mature judgment inclines him to the pursuit of truth, applies to genuine history, which even in old age continues to be a favourite object of his attention; since his desire to be acquainted with the transactions of others has nearly an equal power over his mind with the propensity to relate what has happened to himself.

History, considered with respect to the nature of it's subjects, may be divided into *general* and *particular;* and with respect to time, into *ancient* and *modern*. Ancient history commences with the creation, and extends to the reign of Charlemagne, in the year of our Lord 800. Modern History beginning with that period, reaches down to the present times. General history relates to nations and public affairs, and may be subdivided into *sacred, ecclesiastical,* and *profane*. Biography, memoirs, and letters, constitute particular history. *Statistics* refer to the present condition of nations. GEOGRAPHY and CHRONOLOGY are important aids, and give order, regularity, and clearness to them all. To draw the line of proper distinction between authentic and fabulous history, is the first object of the discerning reader. Let him not burden his memory with events which ought perhaps to pass for fables; let him not fatigue his attention with the progress of empires, or the succession of kings, which are thrown back into the remotest ages. He will find that little dependence is to be placed upon the relations of those affairs in the Pagan world, which preceded the invention of letters, and were built upon mere oral tradition. Let him leave the dynasties of the Egyptian kings, the expeditions of Sesostris, Bacchus, and Jason,

and the exploits of Hercules and Theseus, for poets to embellish, or chronologists to arrange. The fabulous accounts of these heroes of antiquity may remind him of the sandy deserts, lofty mountains, and frozen oceans, which are laid down in the maps of the ancient geographers, to conceal their ignorance of remote countries. Let him hasten to firm ground, where he may safely stand, and behold the striking events, and memorable actions, which the light of authentic records displays to his view. They alone are amply sufficient to enrich his memory, and to point out to him well-attested examples of all that is magnanimous, as well as all that is vile; of all that debases, and all that ennobles mankind. [Mr. Kett's "Elements."] Unfortunately the study of history is not without it's dangers and inconveniences of various kinds. It is a very difficult matter to place one's-self in such a point of view, as to be able to judge equitably of our fellow creatures. It is one of the common vices of history to paint man in a disadvantageous rather than in a favourable light. Revolutions and fatal catastrophes being most interesting, so long as a people have continued to encrease and prosper in the calm of a peaceable government, history has remained silent; it speaks of nations, only when growing insupportable to themselves, they begin to interfere with their neighbours, or to suffer their neighbours to interfere with them. We are favoured with very exact accounts of those nations which verge towards destruction; but of those which have been flourishing, we have no history; they have been so wise and happy as to furnish no events worth recording. The historical relations of facts which we meet with, are by no means accurate delineations;

they change their aspect in the brain of the historian, they bend to his interest, and are tinctured by his prejudices. What historian ever brought his reader to the scene of action, and related the event circumstantially as it happened? Ignorance and partiality disguise every thing. How easy it is to give a thousand varied appearances to the same facts, merely by a difference in the representation of circumstances. Exhibit an object in different points of view, and we scarcely believe it to be the same, and yet nothing is changed, except the eye of the spectator. How often has it happened that a few trees, a hill on the right or left, or a sudden cloud of dust, have turned the scale of victory, without the cause being perceived? Nevertheless the historian will assign a reason for the victory or defeat with as much confidence as if he had been at the same instant in every part of the battle. The worst historians, for a young reader, are those who favour us with their judgment. A plain narrative of facts is all he wants; let him judge for himself, and he will learn to know mankind. If he be constantly guided by an author's opinion, he sees only with the eyes of another; and when these are taken from him he does not see at all. History is generally defective in recording only those facts which are rendered conspicuous by name, place, or date; but the slow progressive causes of those facts, not being thus distinguished, remain for ever unknown. A madness for partly having possession of them all, they never endeavour to see things as they really are, but as they best agree with their favourite hypotheses. [Rousseau, b. iv.] It is the business of history to distinguish between the miraculous and marvellous; to reject the first in all narra-

tions merely prophane and human; to scruple the second; and when obliged by undoubted testimony to admit of something extraordinary, to receive as little of it as is consistent with the known facts and circumstances. [Hume.] In undertaking a course of History, it is certainly of great advantage to follow the chronological order of events. You have then the gradual progress of man from barbarism to refinement; from refinement to corruption, venality, and slavery; from slavery back again to darkness and ignorance; and from this state again to knowledge, civilization, and liberty. The most ancient history, except the Bible, is HERODOTUS; and no history was ever more delightful for it's simplicity, perspicuity, the unaffected style of the narrative, and easy and harmonious flow of the language. Mr. Beloe's translation, tho' not elegant, partakes in some measure, of the simplicity of the original. The history of THUCIDYDES takes not so wide a scope as that of Herodotus, but the period which he describes is interesting, and his manner is incomparable. Smith's translation is tolerably good, and even that of Hobbes may be read without disgust. A more connected view of Ancient History may be learnt from ROLLIN. Our ANCIENT UNIVERSAL HISTORY is an excellent and elaborate compilation, but it is tedious, and the style is dry and inharmonious: it is a book therefore rather for reference than study. The indefatigable Dr. Mavor has produced an abridgment of this work, with additions, to the year 1802, in 25 vol. 18mo. 4*l.* 13*s.* 9*d.* bds. Of the Roman Historians there is a deplorable dearth of good translations. The order in which they may be read is LIVY, SALLUST, CÆSAR. The Epistles

of CICERO are chiefly historical: which are admirably translated by Mr. Melmoth. PLUTARCH'S LIVES should be read immediately after the Greek and Latin historians, or rather in conjunction with them: a good translation has been done by the brothers Langhorne. Of modern works, VERTOT'S Roman Revolutions, MONTESQUIEU'S Greatness and Decline of the Romans, and Dr. MIDDLETON'S incomparable Life of Cicero, may be read with the ancient historians. The last is a production of original genius, and yet comprises all which is most excellent in the writings of the great man whose life it narrates. The ANABASIS of XENOPHON, and the history of POLYBIUS, are most interesting and engaging books: of the latter there is a translation by Hampton. Of the English compilations which contain the history of the Roman commonwealth, FERGUSON'S is preferable to HOOK'S. SUETONIUS'S History of the Twelve Cæsars is an ill-written book, yet it contains facts which are not to be found in any other original author. TACITUS is a treasure, not merely on account of the historical matter which it contains, but for the mass of moral instruction which it conveys. Murphy's translation may be pronounced superior to Gordon's. After finishing Tacitus, we must, of necessity, have recourse to compilation. Mr. GIBBON takes up the subject where Tacitus left it, and certainly a nobler monument of genius was never erected, than the "Decline and Fall of the Roman Empire;" a narrative which extends to so modern a period, that a few books will serve to unite the chain of history with that of our own country. Dr. ROBERTSON'S Charles the fifth is perhaps the most perfect historical composition in the English language;

and Dr. WATSON's History is well connected with it; both of which relate to some of the most important events recorded in history, the reformation of religion, and the establishment of the Batavian republic. Mr. WRAXALL has filled up a chasm on the historical shelf, by his agreeable history of FRANCE; yet the student should not satisfy himself with that author's account of the age of Henry the great, but inspect for himself the interesting and unblemished pages of SULLY; and there are few scholars who will not find exquisite pleasure in the General History of the correct DE THOU. VERTOT's Revolutions of Sweden and of Portugal, are both of them animated narratives of important events. VOLTAIRE's Age of Louis the fourteenth and fifteenth, may be classed among original histories, tho' not of the first rank; his Charles the twelfth borders much on the romance. Dr. ROBERTSON's History of America is a much admired composition. After such a course of reading, the student will not be ill prepared for the history of his own country. HUME's History is a bad compilation. Hume is, moreover, the avowed enemy of the two principles which conduce most to the happiness of mankind; religion and liberty; and he who makes him the standard of his historical faith, will embrace innumerable errors, arising not merely from design but from negligence. As a general history, RAPIN's is preferable; and if the state papers be passed over, it will not be found more voluminous than Hume. Perhaps a better course of English historical reading would be to take Dr. HENRY's History for the early periods; from the conclusion of which he may proceed with Rapin to the date of Clarendon's history; and, for the affairs of Scotland,

having recourse to the classical narrative of GEORGE BUCHANNAN, and the elegant history of QUEEN MARY, by the accomplished Robertson. Clarendon's History, with his Life, are invaluable records; but his statements will, in some instances, be corrected by WHITLOCK's Memorials, which every Student of history ought to read, and by the plain and manly, but interesting, Memoirs of the ill-treated LUDLOW. Tho' Bishop BURNET's egotisms have been ridiculed by Pope, Arbuthnot and Swift, yet he will continue to be read by every one who wishes to inform himself correctly of the manners and circumstances of the times in which that excellent prelate, and really candid writer, lived. Mrs. MACAULAY's history evidently favours republicanism, but her narrative is pure, and she is scrupulously exact in producing evidence and authority for all her facts.

The student of history should always read with a map of the country before him. A good Biographical Dictionary is also an useful companion in the study of history. Various plans have been recommended for connecting history with chronology in the mind; the best method is perhaps to endeavour to fix in the memory the dates of some of the most remarkable events. The intermediate transactions will generally be found to have some link of association with the great events, and it will not be difficult to decide nearly on the date of any of them. There is, however, no better aid to the memory than Dr. PRIESTLEY's *Historical Chart*. [Mon. Mag. May 1797.] On English History, the late Earl of Chatham thus wrote to his nephew. "If you have finished the Abridgement of English History and of Burnet's History of the Reformation, I recommend to

you next, before any other reading of history, OLDCASTLE's *Remarks on the History of England, by* LORD BOLINGBROKE. Let me apprise you of one thing before you read them, and that is, that the author has bent some passages to make them invidious parallels to the times he wrote in; therefore be aware of that, and depend, in general, on finding the truest constitutional doctrines: and that the facts of history, tho' warped, are no where falsified. I also recommend Nathaniel BACON's *Historical and Political Observations;* it is without exception, the best and most instructive book we have, on matters of that kind. They are both to be read with attention and twice over; Oldcastle's Remarks to be studied and almost got by heart, for the inimitable beauty of the style, as well as the matter. Bacon for the matter chiefly; the style being uncouth, but the expression forcible and striking. I desired you some time since to read Lord CLARENDON's *History of the civil wars.* I have lately read a much honester and more instructive book, of the same period of history; it is *the History of the Parliament, by* THOMAS MAY, *esq.* If you have not read BURNET's *History of his own Times,* I beg you will. I suppose you are going through the biographers, from Edward the fourth downwards, nor intending to stop till you reach to the continuator of *honest Rapin.* There is a little book which I never mentioned, *Welwood's Memoirs;* I recommend it. *Davis's Ireland* must not on any account be omitted: it is a great performance, a masterly work, and contains much depth and extensive knowledge in state matters, and settling of countries, in a very short compass. I have met with *a scheme of chronology by Blair,* shewing all contemporary his-

torical characters, through all ages: it is of great use to consult frequently, in order to fix periods, and throw collateral light upon any particular branch you are reading." [Letters, passim.] To the historical works already recommended, may be added the following excellent articles.

Luckombe's Tablet of Memory, 18mo, 4*s* bound. Robinsons. Holland's Essays on History, 12mo, sewed. Longman. Bigland's Letters on the Study and Use of Ancient and Modern History, 8vo, 10*s* 6*d* bds. Rutherford's View of Ancient History, 8vo, 8*s* bound. Tytler's Elements of General History Ancient and Modern, 2 vol: 8vo, 12*s* bds. Cadell. Mortimer's Student's Pocket Dictionary, 12mo, 4*s*. Johnson. Rollin's Ancient History, 8vo, 3*l* 4*s* bds. 10 vol. 12mo, 1*l* 15*s*. Rollin's Modern History, 8 vol. 8vo, or in 10 vol. 12mo, neatly bound, 2*l* 5*s*. Goldsmith's History of Greece, 2 vol. 8vo, 12*s*. Mitford's History of Greece, 6 vol. 8vo. Travels of Anacharsis the younger, in Greece, by the Abbé Barthelemi, 7 vol. 8vo, 2*l* 12*s* 6*d* bds. Robinsons. Goldsmith's Roman History, 2 vol. 12*s*, bds. Hooke's Roman History, 11 vol. 8vo, 3*l* 6*s*. Lyttelton's History of Henry the second, 6 vol. 8vo, 2*l* 2*s*. Whitaker's Mary Queen of Scots, vindicated, 3 vol. 8vo, 18*s* bds. Belsham's History of George the first and second, 2 vol. 8vo, 16*s* bds. Belsham's History of the Reign of George the third, 6 vol. 8vo, 2*l* 10*s* bds. Bissett's History of the Reign of George the third, to the Treaty of Amiens, 6 vol. 8vo, 2*l* 12*s* 6*d*. Stuart's View of Society in Europe, 8vo, 7*s* bound. Russel's History of Modern Europe, in Letters, 5 vol. 8vo. 2*l* bound. Priestley's Lectures on History and General Policy, 2 vol. 8vo, 14*s* bound.

Condilliac's View of Universal History, in his "Cours d' Etude pour l' Instruction du Prince de Parma." This history carries on with the records of wars and revolutions, the history of the progress of the human mind, of arts and sciences; the view of the different governments of Europe is full, and concise; no prejudices are instilled, yet the manly and rational eloquence of virtue gives life and spirit to the work. This is not recom-

mended as an elementary work, but it is one of the best histories which a young man of 15 or 16 can read.

Du Fresnoy's Chronology, 2 vol. 8vo. Blair's, with Maps, folio, 4*l* 16*s* bds., and Playfair's, in folio, 2*l* 10*s* bds.

L' Art de vérifier les Dates, des Faits Historiques des Cartes, des Chroniques, et autres anciens Monumens, depuis la Naissance de notre Seigneur, 6 tom. fol. Paris, 1783.

Lempriere's Classical Dictionary, containing a copious Account of all the proper Names mentioned in ancient Authors, with the Value of Coins, Weights, and Measures used among the Greeks and Romans, and a chronological Table. 4to, 1*l* 11*s*. 6*d*. Cadell.

POLITICS.

No circumstance, however minute, must escape the eye of the politician, who would attain certainty and truth in his conclusions. To discover the general effect of the vast number of variable causes, requires the exercise of the highest energies and powers of the mind. It tends also to cultivate all the finer movements of the heart, by engaging our attention, and interesting us in the contemplation and investigation of human society. No exercise of the mind, accompanied with pleasure, can leave the objects, by the operation of which such exercise is occasioned, indifferent to us. The pleasure attendant upon political enquiries and investigations is very considerable, owing to the great mental exertion, which they require, and the importance of the subject. A person conversant in the science of politics, must, therefore, possess a bad heart indeed, who feels no pleasure in the contemplation of his fellow-men, the immediate object of his investigation. A benevolent and humane mind, who has made herself mistress of political science, and felt the delight arising from the mental exercise which such study requires, must always after-

wards be disposed to consider mankind in a pleasing point of view. The influence which the study of political knowledge tends to produce on the condition of society in general, must be extremely beneficial. Independent, therefore, of every other consideration, this particular part of study should be adopted into the general system of education, in order that every individual member of society may contribute to the welfare and happiness of the community. [Dr. Cowan.]

Tully's Offices; Puffendorf's Duty of Man and a Citizen, his Law of Nature and Nations; and Grotius on War and Peace, may serve to instruct the young student in the common rights of mankind, the origin and design of society, and the several duties connected with it. From De Lolme on the English Constitution, 8vo, 8*s*, may be obtained an extensive view of the English constitution and government. Junius's Letters are considered as the most correct and polished composition ever produced on political subjects. Cambell's Political Survey of Great-Britain, 2 vol. 4to, 1*l* 18*s*; and Goguet on the Origin of Laws, Arts, and Sciences, 3 vol. 15*s* sewed, 1762, are entitled to close attention.

LAW.

He who pursues the study of the law merely as an accomplishment, in a comprehensive plan of education, will find all the necessary lights in the volumes of Grotius, Puffendorf, Taylor, Burns, and Blackstone. To the professed lawyer scarcely any book on the subject of law is uninteresting and useless. In his conduct, two rules should be strictly attended to, if he would look with confidence to a future state of reward, and enjoy the approbation of a pure conscience during life: they are these. Never affirm what is not strictly true, nor defend what you perceive to be unjust. The books which have been published in this department of learning

are multifarious and complex. The following may be mentioned as deserving more than ordinary attention.

Bridgman on the Study of the Law, 8vo. 4*s* 6*d* bds. Clarke. Blackstone's Analysis of the Laws, 8vo. Blackstone's Commentaries on the Laws of England, by Christian, 5 vol. 2*l* 2*s* bds. Curry's Abridgment of Blackstone's Commentaries, 9*s* bds. Beccaria on Crimes and Punishments, 8vo, 4*s* 6*d*. Montesquieu's Spirit of Laws, 7*s* 6*d* bds.

BIOGRAPHY

is a highly important branch of history. The biographer, by his accurate researches, supplies the deficiencies of the historian. What the latter gives us only in outlines and sketches, the former presents in more complete and highly finished portraits. Their province does not merely extend to those who have acted upon the great theatre of the world, as sovereigns, statesmen, and warriors; but to all who have improved human life by their useful discoveries, adorned it by their works of genius, and edified mankind by their examples. With what pleasure do we select a *Bacon*, a *Boyle*, a *Newton*, an *Addison*, a *Locke*, a *Radcliffe*, a *Howard* and a *Hanway*, from the multitudes which surround them, and become acquainted with their particular characters and conduct! To contemplate such men, not inflamed by vain ambition, or courting empty popularity, but seeking retirement, and giving dignity to the walks of private life by the efforts of genius, and the exertions of philanthropy, is a high gratification to the mind, and inspires it with an admiration and a love of those virtues, which come within the reach of general imitation. No species of writing gives a more perfect insight into the minds of men,

than their LETTERS. We observe them as they thought in their retired moments, when, withdrawn from the bustle of the world, they gave free scope to their unrestrained opinions, and poured them, without reserve, into the bosoms of their friends. Among the numerous instances, which might be selected of epistolary excellence, we distinguish the letters of *Cicero*, which display the sentiments of a vigourous mind, and give an insight into the eminent characters of his eventful times. *Pliny*, in letters remarkable for neatness and precision of thought, expresses the dictates of a cultivated and generous mind. If we turn our attention to the epistolary literature of our own country, we shall find that the piety and affection of *Lady Russel*, the quaintness and pleasantry of *Howel*, the manliness and political sagacity of *Stafford*, the philosophical exactness and cool judgment of *Locke*, the simplicity of *Rundle*, the moralising vein of *Johnson*, and the taste and elegance of *Gray*, mark their respective letters with the strongest characters of originality, and gives us the most pleasing pictures of their minds. [Mr. Kett's Elements.]

Besides the names elegantly enumerated by Mr. Kett, the following may be added, as justly celebrated letter-writers; viz. *Pope, Swift, Addison, Steele, Arbuthnot, Gay, Shenstone, Sterne, Lyttelton, Lady Mary Wortley Montague, Richardson, Chesterfield, Cowper, Sevigny,* and *Maintenon.* Biography is, in general, a most pleasing as well as instructive branch of literature. When faithfully written it unveils man to man; discovers the virtues and vices, the nobleness and the meanness of which he is capable; and shews how the original sameness of human nature is varied by the operation of external

causes into ten thousand different shapes, and assumes as many shades and hues. Man, to be known, must be viewed in every situation; and whenever he is fairly exhibited, whatever may have been his rank, station, or circumstances of birth or fortune, a valuable addition is made to science. Whether the record respects the struggles of talents and worth through the chilling regions of obscurity and penury, up to the glittering eminences of fame and reward; or whether it details the operations of pride and ambition on minds born to wealth and power; it presents an useful lesson, which those who are disposed to exertion and virtue will not read in vain. [Mon. Rev.] I would begin the study of the human heart by reading the lives of particular men; for there the hero conceals not himself for a moment. The biographer pursues him into his most secret recesses, and exposes him to the piercing eye of the spectator; he is best known when he believes himself most concealed. I confess the genius of a people is very different from that of man considered as an individual, and that we shall be imperfectly acquainted with mankind if we neglect the study of the multitude; but it is also true, that we must begin by studying man in order to know mankind; and that if we know the propensities of each individual it will not be difficult to foresee their effects when combined in the body of the people. The lives of kings may be written and rewritten, but we shall never see another SUETONIUS. PLUTARCH's excellence consists chiefly in those very minutiæ into which we dare not enter. There is an inimitable gracefulness in his manner of painting great men engaged in trivial employments, and he is so happy in the choice of his

incidents, that frequently a single word, a smile, a gesture, is sufficient to characterize his hero. MARSHAL TURENNE was incontestibly one of the greatest men of the age in which he lived. The writer of his life has had the resolution to render it interesting by relating some minute particulars which make his hero known and beloved; but how many was he obliged to suppress, which would have taught us to know and love him still more! I shall instance one which I had from good authority, and which Plutarch would by no means have omitted, but which Ramsay, if he had known it, would not have dared to relate. The Marshal happened, one hot day, to be looking out at the window of his antichamber in a white waistcoat and night-cap. A servant entering the room, was deceived by his dress, and mistook him for one of his under cooks. He crept softly behind him, and with a hand, which was not one of the lightest, gave him a violent slap on the breech. The Marshal intstantly turned about, and the fellow, frightened out of his senses, beheld the face of his master: down he fell on his knees. "Oh! my lord! I thought it was George!" "And suppose it had been George," replied the Marshal, rubbing his backside, "you ought not to have struck quite so hard." There are few people capable of conceiving the effect which reading, thus directed, would have on young minds. [Rousseau, b. iv.]

The best modern Biographical Dictionaries are Jones's, 5*s* bound; Watkins's 15*s* bds; and the "General Biography," now publishing in 4to. volumes, by Dr. Aikin, and others. Former Works of great repute are, The British Plutarch, 8 vol. 12mo, 1*l* 4*s*. The New Biographical Dictionary, 15 vol. 8vo, 6*l*. Payne. The Biographia Britannica, by Dr. Kippis. Vol. 1 to 6, folio, 9*l* 19*s* in sheets. Robinsons.

The labour and research bestowed on these volumes is immense, and the fair and liberal manner in which the publication was conducted, will remain a lasting monument of the integrity and candour of Dr. Kippis, whose loss every friend to literature and truth laments.

The General Historical and Critical Dictionary by Birch, Sale, and others, containing the Whole of Bayle's Dictionary, with many Additions, 10 vol. folio. The Biographical Mirror, containing Portraits of eminent and distinguished Persons, 3 vol. 4to, 12*l* 12*s* bds. Harding.

Dr. Priestley's Chart of Biography on two large sheets of royal paper, brought down to the close of the last century, with an explanatory book, 10*s* 6*d*; or on canvas and rollers, 14*s*. Johnson.

The following Lives of Individuals are fine Specimens of this kind of writing. Voltaire's Lives of Charles xii of Sweden and the Czar Peter. Aikin's Life of Howard. Dr. Franklin's Life written by himself. Pugh's Life of Hanway, 1788. Johnson's Life of Savage. Topham's Life of Elwes. Boswell's Life of Johnson. Hayley's Life of Cowper. Lord Teignmouth's Life of Sir Wm. Jones. Good's Life of Dr. Geddes. Memoirs of Marmontel, by himself. Mr. Hayley's Life, by himself.

THE FINE ARTS.

Great excellence in any of the ELEGANT ARTS is an unfavourable circumstance to youth, and except they be intended to exercise those arts, as a profession, a *mediocrity* is as much as is desirable. I would rather, therefore, that young persons should apply to them when it is too late to attain to much more than a mediocrity. A first-rate musician can never be any thing else, and an incomparable dancer can make nothing but a dancing master, or a coxcomb. It is impossible but that persons must be fond of opportunities of exhibiting themselves in that character in which they particularly excel. Besides, a refined taste, and great execution in the fine arts, necessarily leads a person to keep company with the celebrat-

ed *artists*, most of whom are men of low taste in other respects, of uncultivated minds, and profligate in their morals. There are honourable exceptions to this observation, but it must be allowed that this is too generally the case with musicians, painters, players, &c. All these arts, singly taken, are *little* things, and a truly great mind will not give much attention to them, so as to make them his chief object; and a man will seldom arrive at great excellence in what he has recourse to only as an *amusement*. It must be added, that distinguished excellence in any of the arts hardly ever fails to beget the most excessive and ridiculous vanity, and a supercilious contempt of those who are unacquainted with them, or whose proficiency is not equal to their own, It is only an acquaintance with more liberal and manly science, and an extensive view of what has been attained, and what yet remains to be attained by man, which inspires true dignity and generosity of sentiment; which is always accompanied with an humility and diffidence, which is inconsistent with any thing like pride or contempt of others. [Dr. Priestley.]

See Dallaway's Ancedotes of the Arts in England, &c. 8vo. 10*s* 6*d*. Cadell.

AGRICULTURE AND THE MECHANIC ARTS.

The first and most respectable of arts and professions is that of agriculture. Next to the husbandman I rank the smith; to the smith succeeds the carpenter, and so on. A child, who should not have acquired a misjudging partiality, from vulgar prejudices, would rank them also precisely in the same order. [Rousseau, b. iii.] The man who earns not his subsistence, but eats the bread of idleness, is no better than a thief; and a pensioner who

is paid by the state for doing nothing, differs little, in my opinion, from a robber who is supported by plunder on the highway. Man, in a state of solitude, not being indebted to the assistance or good offices of others, has a right to live as he pleases; but in a state of society, where he must be necessarily maintained at the expense of the community, certainly owes the state so much labour as will pay for his subsistence; and this without exception to rank or persons. To labour, then, is the indispensible duty of social or political man. Rich or poor, strong or weak, every idle citizen is a knave. Of all the occupations, which furnish subsistence to mankind, those which approach nearest to a state of nature are the manual arts. Of all conditions of life, the most independent of fortune or the caprices of mankind, is that of the artisan. The artisan depends only on his own labour; he is perfectly free. The husbandman in comparison is a slave; for he depends on the produce of his fields, which are exposed to the incursions of others. The enemy, the sovereign, a powerful neighbour, a law-suit may deprive him of the crop which he laboriously has toiled for. He may be distressed a thousand ways by means of the local stability of his property; whereas if an artist be oppressed in one place, his baggage is easily packed up, and he disdainfully marches off to another. Agriculture is nevertheless, the principal profession of mankind; it is the most honest, the most useful, and, of course, the most creditable in the world. I have no need to require my pupil to apply himself to agriculture; it is already his study; every kind of rural employment is familiar to him. His first application was to the labours of the husbandman, and

it is in those he regularly exercises himself. I say to him, therefore, cultivate the land which thou inherit est from thy fathers. But it may be said, suppose this were to be lost, or that a child had no paternal inheritance, what must he do then? Learn a trade. "My child learn a trade! make my son a mechanic! Consider, sir, what you advise." "I do, madam, I think more carefully than you, who would reduce your child to the necessity of being a lord, a marquis, or a prince; and perhaps one day or other to be less than nothing. I am desirous of investing him with a title which cannot be taken from him, which will in all times and places command respect. [Rousseau, b. iii.] The great Athenian legislator enacted a law, that a son should not be obliged to maintain a father who had not instructed him in some art. How many fathers would perish for want, if such a law were enacted in modern times! Indeed the whole occupation of THE RICH is one continued round of useless pleasures and puerile amusement. Their discourse for the most part is either on the pleasures of the palate, or of the chace. They live only, as Pliny says, for the day, and daily terminate the purposes of life. [Northmore.] In the beneficial departments of society the following books, if consulted, would suggest important plans.

Abercrombie's Gardener's Pocket Journal, 1*s* 6*d* and 3*s*. Crosby. Abercrombie [or Mawe]'s Every Man his own Gardener, 12mo, 7*s* 6*d*. bound. Young's Rural Economy, 8vo, 6*s*. Kaimes's Gentleman Farmer 8*s*, bound. Robinsons. Marshall's Rural Economy, of Yorkshire, 2 vol. 8vo, 12*s* bds. Nicol.——of the West of England, 2 vol. 8vo, 12*s*.——of the Southern Counties, 2 vol. 8vo, 15*s*. Marshall's Planting and Rural Ornament, 2 vol. 8vo, 15*s* bds. Marshall's Plain and Easy Introduction to the Knowledge and Practice of Gardening,

12mo, 5*s*. bound. Rivingtons. Marshall's Treatise on the Purchase, Improvement, and Management of Landed Property, 4to, 2*l* 2*s*. Longman. Dr. Anderson's Essays on Agriculture and Rural Affairs, 3 vol. 8vo, 1*l* 7*s* bound. Dr. Hunter's Georgical Essays; being a Selection of the most approved Essays on Agriculture, which have been published within the last 100 years. 6 vol. 8vo. 3*l* 3*s* boards. Mawman. The Earl of Dundonald's Treatise on the Nature and Application of the different sorts of Manure, 4to, 10*s* 6*d*, bds. Murray. The New Farmer's Calendar, or Monthly Remembrancer for all Kinds of Country Business, 8vo, 9*s*, bds. Symonds. Dr. Darwin's Phytalogia, or the Philosophy of Agriculture and Gardening, 4to. 1*l* 11*s* 6*d*. Johnson. Culley's Observations on Live Stock; containing Hints for choosing and improving the best Breeds of the most useful Kinds of Domestic Animals; with Plates, 6*s*. Dr. Willich's Domestic Encyclopædia, comprehending a concise View of the latest Discoveries, Inventions, &c. chiefly applicable to Rural and Domestic Economy, 4 vol. 8vo, 2l 2*s*. Murray. Smith's Laboratory, or School of Arts. 2 vol. 8vo, 1*l* 1*s* bds. The Farmer's Magazine, published quarterly at 2*s* 6*d* each number.

ARCHITECTURE,

or the art of building, according to some standard of taste has taken place in all societies where commerce and riches have afforded the means for expensive gratification. A large mansion, richly ornamented, is, from the grandeur of it's appearance, adapted to sooth the pride of a lordly owner. The pleasures of possession are encreased by the consciousness, that we are enjoying what the bulk of mankind are from circumstances less fortunate, denied; and the respect which riches meet with, incline men to affect such appearancss as are calculated to convey to the spectator the idea of their opulence. The effects of architecture, when we confine the signification of this term to denote only public buildings, either of orna-

ment or utility, cannot be considerable over the minds of any people; but when we add to these all the edifices which men employ in civil society, for the purposes of domestic comfort, and conveniency, we cannot imagine their influence to be trifling or insignificant. Neatness and convenience in a habitation affords one of the most grateful sources of pleasurable emotion to the mind of it's inhabitant. It cannot therefore be imagined that the influence of such circumstances over the dispositions and characters of men will be inconsiderable. Every little object connected with his home is always particularly interesting to the possessor. For this reason it may appear that the exertions of philanthropy and benevolence can perhaps never be better employed than in endeavouring to augment the domestic comforts and enjoyments of society. Of the various means to effectuate this truly estimable intention, few will be found more deserving attention than the condition of the habitations of the poor. The very pressing necessities of the lower classes of society require in general all the exertions of charity and affluence. Were those propensities however which prompt men to benevolence and philanthropy still more prevalent in society, they might be extended to other objects meriting perhaps in an equal degree their attention and regard. [Dr. Cowan.]

There is one thing which is incumbent on all great farmers to do; and that is, to provide comfortable COTTAGES for two or three of their most industrious labourers, and to lay two or three acres of grass land to each, to enable such labourers to keep a cow and a pig. Such a man is always a faithful servant to the farmer who employs him; he has a stake in the com-

mon interest of the country, and is never prompt to riot in time of sedition, like the man who has nothing to lose; on the contrary, he is a strong link in the chain of national security. There are but few great farmers who are inclined to accommodate cottagers with these little portions of land; and when they do let them any, it is generally at double the rent they give for it. But I am persuaded, that if there were a certain number of cottages, of this description, in proportion to the size of the estates, and they were accommodated in this manner, and those places were bestowed as a reward to labourers of particular good conduct, it would do wonders toward the reduction of the rates, and the preservation of order; for I have been witness to several striking proofs of this, in two or three labourers who have been thus favoured, whose attachment to their masters was exemplary, as they were not only steady themselves, but by their example kept others from running into excess. There cannot well be too many of these places attached to large farms; they would be the most prolific cradles of the best sort of population. [Kent's Agricultural Report of Kent.]

The following Books may be recommended as very pleasing and interesting works.

Bartell's Hints on Picturesque Improvements in Ornamented Cottages and their Scenery, 8vo, 6 plates. 10*s* 6*d* bds. Malton on Cottage Architecture; with Observations on Building Materials and Effect. 4to 1*l* 1*s* bds. Coloured copies 1*l* 15*s*. Plaw's Sketches for Country Houses, 1*l* 14*s*, bds. Gandy's Designs for Cottages, Cottage-Farms, and other Rural Buildings. 4to. Nicholson (Peter)'s Principles of Architecture, 3 vol. 8vo 2*l* 15*s*. Phillips's Builder's Price-Book, 8vo. 3*s*, sewed. Crosby.

BUSINESS.

If we would form an estimate of other objects of pursuit according to their importance, it will be evident that those which are necessary for subsistence are of the first consequence, because life must be sustained in order to any course of conduct. Those persons, therefore, who have no other means of subsistence, must be instructed in such arts as will enable them to support themselves to the most advantage. Supposing a man's circumstances to be such, as that he has no occasion to attend to this consideration with respect to his children; being able to provide for their subsistence and reputable appearance in the world, independent of their own industry, the only thing to be attended to is to train them up to such pursuits as will qualify them to be most happy in themselves, and most useful to others, tho' considering the instability of all human affairs, it is prudent, in most cases, that every person be taught some art, by which he may be able to maintain himself in case of a reverse of fortune. Why should we suffer our prejudices to deprive our sons of a valuable privilege? Do not be alarmed, I am not going to give the distaff into the hands of my male pupils. No; but sheltered from the sarcasms of the critic, by the authority of a Locke and a Rousseau, I will venture to recommend the teaching of boys some handicraft business, as an occupation to fill up the yawning insipidity of a vacant hour. For tho' we have had many satirical animadversions on the art of turning, I would rather see my pupils engaged in the innocent employment of forming a button, than in spending whole days in hunting down a harmless animal, both at the hazard of their necks, and at the expence of their benevolence. [Mrs. Macaulay.]

ON THE CHOICE OF A TRADE OR PROFESSION.

By giving a child a successive view of the various productions of nature and art, by exciting his curiosity and tracing it's tendency, we may be enabled to study his taste, inclinations, and propensities; to discover the first spark of his genius, and whether it be of any particular turn. But it is a common error, which you ought carefully to avoid, that of attributing to the warmth of genius the mere effect of opportunity, and to construe into an inclination for a particular art, that spirit of imitation which is as common to the ape as to the human species, and leads him mechanically to do what he sees done by others, without considering to what purpose it tends. The world is full of artisans, and particularly of artists, who have no natural talents for the arts they profess, to which they have been trained from their infancy, either from motives of convenience, or from some apparent zeal which had operated as well in favour of any other art, had the same opportunities offered of seeing it exercised. One youth hears the beat of a drum, and immediately conceives himself born to be a general; another sees the masons at work, and forms the design of being an architect. Most are tempted to make choice of that profession which offers itself, and appears to be held in esteem.

I knew an instance in a foot-boy, who, from seeing his master design and paint pictures, took it into his head to be a limner and historical painter. From the moment he formed this resolution, he took up the crayon, which he laid down only to assume the pencil, and this he will never quit while he lives. Without rules, without instructions, he set himself down to make sketches of every thing which fell in

his way. Three whole years did he sit poring over his wretched daubings, getting nothing but his labour for his pains, and yet without being disgusted at the little progress his mediocrity of talents permitted him to make. I remember to have seen him, for six months together in a very hot summer, sitting, or rather nailed to his chair, in a little antichamber open to the south, before a globe, of which he was attempting to draw the figure; beginning, rubbing out, and beginning again, and again, with the most invincible obstinacy, till at last he hit off the rotundity of the sphere to his satisfaction. By the directions of an artist and the patronage of his master he at length so far succeeded as to throw off his livery, and live by his pencil. Perseverence supplied his want of talents to a certain degree; having attained this, he could never advance further. The spirit of resolution and emulation in this honest lad are commendable; he will ever be esteemed for his assiduity fidelity, and good behaviour; but he will never rise in his profession higher than to the merit of a sign-painter. Who is there who has not been misled by his inclinations, and mistaken them for real abilities? There is a considerable difference between being pleased with any occupation, and being capable of it. It requires much nicer observation than is generally imagined to ascertain the taste and genius of children; their casual inclinations display themselves oftener than their innate dispositions, and we judge from the first, for want of knowing how to study the last. I wish some judicious hand would give us a treatise on the art of studying children, an art of the greatest importance, though fathers and preceptors appear to know not it's simple elements.

Let every man apply himself to an EMPLOYMENT becoming his sex and age. A close and sedentary profession, which enervates the body, will neither please nor be proper for youth. Not one ever yet naturally aspired to be a tailor; artificial motives are required to induce our sex, for whom such business was never designed, to embrace so effeminate an employment. There were no tailors among the ancients; the clothes of the men being made at home, by the women of the family. The sword and the needle are not made for the same hands. None but women, or maimed and deformed persons, should be permitted to follow any such kind of trade. Every feeble, timid, and delicate male is condemned by his constitution to a sedentary life; he is formed to live among the females, or at least after their manner. Let such be early initiated into the mysteries of the tailor the mantua-maker, and other professions of the like nature. I prohibit my pupil following any unhealthy business, but not those which are laborious, or even dangerous. The latter exercise at once both his strength and courage; they are proper for the men only; the women making no pretensions to them. How comes it then, that the men are not ashamed to encroach on those properly exercised by the women? When I see your haberdashers and man milliners, measuring out lace, ribbons, and gauze to the ladies, I cannot help thinking that such elegant commodities appear very ridiculous in those clumsy fists, which would be with greater propriety employed in blowing a smith's bellows, or at the labours of the anvil. I think the women by way of reprisals ought to turn sword-cutlers and gun-smiths. Let each sex manufacture and vend the arms peculiar to itself.

To understand them well, it is requisite we should know how to employ them. I perceive I have said more than will be relished by my polite and affected cotemporaries. In defiance of fashion, however, I will maintain that if any man whatever be ashamed of being seen to handle a plane, or wear a leather-apron in public, he is a slave to prejudice, and one who would be ashamed of the most commendable actions, if they were ridiculed as unfashionable. I would never allow a boy of genius to exercise any of those stupid employments which require no mental exercise. Such are cloth and stocking-weavers, stone-sawyers, and the like. Why should persons of any understanding be put to such trades, wherein the workman and his engine are only one machine moving another? Czar Peter wrought as a common ship-carpenter in the yard, and served as a drummer in his own troops. Do you think, reader, that that prince was not your equal, at least either in birth or merit? If it should happen that your pupil has a natural turn for the speculative sciences, he might be taught a mechanic art adapted to his inclinations, such, for example, as to design and construct mathematical instruments, quadrants, telescopes, and the like. [Rousseau, b. iii.] The following books on the subjects of trade, &c. are of established reputation: Tucker's Essay on Trade, 8vo. 1753. Anderson's Origin and History of Commerce, 4 vol. 4to. 5*l* 5*s*. Postlethwayt's Dictionary of Trade and Commerce, 2 vol. fol. 4*l* 10*s* bound. 1726 Smith's Enquiry into the Nature and Causes of the Wealth of Nations, 3 vol. 8vo. 1*l* 4*s* in calf binding. Montefiore's Commercial Dictionary; containing the present State of Mercantile Law, Practice, and Custom, 4to. 2*l* 12*s* 6*d* bds. Macpherson's Annals of Commerce, 4 vol. 4to. 8*l* 8*s* boards. Beckmann's History of Inventions, by Johnson, 3 vol. 1*l* 1*s* bds,

EMPLOYMENT FOR PERSONS OF FORTUNE.

The first thing to be attended to by every person of large landed property, and who, as is usual, lives upon part of his own estate, is the cultivation of it in the most perfect and ornamental manner. This, without being more laborious than shall be perfectly agreeably to a man's self, will supply him with a constant motive for *exercise* and *employment*, without which it is not in the constitution of our natures that any person should enjoy good health or spirits; and without this, life is so far from being of any value, that it is a burden. The high and beautiful culture of the earth is also a very good object for the exercise of a man's judgment and taste, and a natural subject of laudable pride, the effects of it being conspicuous in the neighbourhood, to all visitors, and even to travellers, who easily know when they are near the residence of a man of fortune, taste, and spirit. This employment is adapted to every person of fortune without distinction, requiring no extraordinary genius or ability. Of *scientific pursuits*, I have no scruple to say, that the most liberal the most honourable, the happiest, and what will probably be the most successful employment for a person of fortune, is the *study of nature*, including the two branches of it, *natural history*, and *natural philosophy;* and therefore, that to this great object a principal attention should be given in the education of every person who can support himself without any profession, and who has the necessary means of applying to these pursuits. And this is far from being inconsistent with any other study or pursuit that may be thought proper for his rank and station in life. A very few plain considerations will be decisive in favour of this con-

clusion. The proper study of any class of beings is, certainly, those *objects*, and those *laws* by which themselves are most affected, and on their acquaintance with which their well-being principally depends. Now all the *arts* of human life, from the exercise of which is derived every thing that tends to the security and happiness of mankind, depend upon a knowledge of those *powers of nature* with which we are conversant; and the only possible way of increasing the conveniencies of human life, of guarding against the inconveniencies to which we are subject, and of enlarging the powers of man, is a farther acquaintance with the powers of nature, of which we are, thereby, enabled to avail ourselves. The *culture of the ground*, from which we derive our immediate support, all that we are enabled to do by means of the several *metals*, on which almost every thing relating to civilized life depends; *architecture*, by which we provide ourselves commodious and elegant habitations; *navigation*, by means of which we are supplied with the commodities of distant countries; the business of *fortification* and *war*, by which we are enabled to defend ourselves; together with a thousand articles of inferior note, by which we procure ourselves particular advantages, and save the labour of men, by employing the powers of the wind, water, &c. and secure ourselves against many of the accidents of life, even the destructive power of lightning itself, not to mention what relates to the cure of *diseases* to which we are subject; are all derived from an acquaintance with the *laws of nature*, or in other words, from our knowing the consequences of placing things in given situations. The great superiority of modern over ancient times, is owing

to our greater knowledge of nature; and the certain consequence of the increase of natural knowledge, will be as great a superiority of future times over the present, as that of the present over the past. It is a great advantage attending this study, that every new discovery serves as a key to many more, of a similar nature. Here, then, is an immense and boundless field open to all who have *leisure*, and the necessary *means* of cultivating it, in which there is a moral certainty of considerable success, and every instance of which will redound to the emolument of our species. And of whom may mankind expect an application to those pursuits which terminate in the common good of the species, but of those whom Providence has exempted from the task of maintaining themselves by their labour? Since others till the ground, and do all the drudgery of life for them, they ought, in return, to employ their time and fortune for the common benefit. Besides, this is more immediately the business of the rich, as their fortunes best enable them to avail themselves of such advantages and conveniences as a farther knowledge of nature may bring within our reach; so that the power of extending this most valuable branch of knowledge, and that of reaping the principal benefit of it, are equally their's. And these solid advantages, derived from natural knowledge, are distinct from the pleasure and *amusement* that will occasionally result from those striking and beautiful appearances which natural philosophy can furnish, and which alone are an inexhaustible source of rational entertainment. This field of useful pursuit is by no means confined to men of great genius. In fact, men of common *good sense* and sufficient *industry* have generally dis-

tinguished themselves the most in this way; and the history of philosophy shews, that the most valuable discoveries have been made in such a manner as reflects honour on the *patient attention*, rather than on the *penetration* of the authors. In these pursuits, more eminently than in any other, may a man find that perpetual and encreasing *variety* which is one of the greatest charms of human life, and no time or season is improper for them. Summer or winter, sunshine or rain, have each their peculiar advantages; so that no man who has a proper taste for these pursuits will ever have reason to complain that his time hangs heavy on his hands, which is the greatest source of unhappiness to persons of large fortune, who are exempt from the common, but generally, enlivening cares of life [Dr. Priestley on Education.]

THE CLERICAL PROFESSION.

There is no character on earth so amiable as that of a TRUE PASTOR. He is a minister of goodness. No circumstance or situation can tempt him to evil. Is he accidentally rich? riches are, fortunately, in his hands, the source of a more extended field of benevolence. Is he poor? he does not on that account relax in his duty of benefiting his parishioners, for he continually solicits the assistance of the wealthy. The greatest portion of his time is spent in passing from house to house, from the rich to the poor; not with a design to receive favours, or to indulge his palate; but to seek the distressed wherever they have concealed themselves. He severely checks licentiousness, whenever he meets with it, and counsels and assists the unhappy. He induces his parishioners to love concord, and cherish industry, in order to banish indigence; and when they see that he is no

richer than themselves, and yet lives contentedly, they learn to be content also.

> " Unskilful he to fawn, or seek for power,
> by doctrines fashion'd to the varying hour;
> far other aims his heart has learn'd to prize,
> more bent to raise the wretched than to *rise*.

He is purely directed by the sense of the gospel, the tenets of which are simple, and it's morals sublime; it teaches few religious forms and many deeds of charity. He never enjoins what he does not strictly practise himself, in order to prove that his admonitions are sincere.

> " In all his duty, prompt at ev'ry call,
> he watches, weeps, he prays, and feels for all.
> And, as a bird each fond endearment tries
> to tempt his new-fledg'd offspring to the skies,
> he tries each art, reproves each dull delay,
> allur'd to brighter worlds, he leads the way.
> Beside the bed where parting life is laid,
> and sorrow, guilt, and pain, by turns dismay'd,
> the reverend champion stands. At his controul,
> despair and anguish fly the struggling soul;
> comfort comes down the trembling wretch to raise,
> and his last falt'ring accents whisper praise.
> At church, with meek and unaffected grace,
> his looks adorn the venerable place;
> truth from his lips prevails with double sway,
> and fools, who came to scoff, remain to pray.
> The service past, around the pious man,
> with ready zeal the honest rustics ran;
> e'en children follow, with endearing wile,
> and pluck his gown, to share the good man's smile.
> His ready smiles a parent's warmth express,
> their welfare pleases, and their cares distress;
> to them his heart, his love, his griefs are giv'n,
> but all his serious thoughts have rest in Heaven.

He makes no difference between the dissenters in his parish, and those of his own flock, in what relates to acts of Christian charity. He endeavours to make them equally love each other as brethren.

He respects all religions, and peacefully enjoys his own. He is convinced that all men are sincere in the opinions they have imbibed, especially those which relate to their future eternal welfare, and that they do not intentionally impose on themselves. He carefully endeavours to preserve the public peace; believing that the laws of whatever country we reside in, should be obeyed. He has a correct knowledge of all the leading points of the law, by which he often prevents his poor neighbours from ruining themselves by litigations; he is so much of a physician as to administer with success in ordinary cases; and, constantly attending to the new improvements in agriculture, he is able to be serviceable to the surrounding poor farmers. Such are the outlines of the character of a *true* pastor, who zealously copies the bright example of his Lord, and literally, like him, goes about doing good. It may be boldly asserted, that he who assumes the office of a teacher of Christianity, without these palpable and essential criterions, may be set down a pretender only, an expensive finger-post, who merely points the way. The professed expounder of the scriptures, should certainly be acquainted with the HEBREW LANGUAGE, especially as a very moderate degree of application, would make him competently acquainted with it. If the student wish to take the simplest means of obtaining a knowledge of this language, let him procure a Hebrew Bible, and Pike's Hebrew and English Lexicon, 8vo. 5s, or a Parkhurst's Lexicon, 8vo. 1*l* 1*s*. 4to 2*l* 2*s*. The bible instead of being prostituted to the purposes of teaching children to read, and thereby rendered ordinary or disgusting, should be preserved, as it is, *a sacred book;* and seeing that

it abounds with all the various beauties of the Greek and Roman classics, it should be read and considered as the first and best of *standard classics*. Moses shines unrivalled both as a poet, an orator, and historian; David as a poet; Solomon as a moralist and pastoral writer; Isaiah, Jeremiah, Ezekiel, Nahum, and some other of the miner prophets, as orators, or poets, or both; the four Evangelists as orators and historians; St. Peter and St. James as writers of extraordinary rank; and St. Paul as the most sublime of authors, and eloquent of orators. Read Lowth's celebrated "Prælectiones de Sacrâ Poesi Hebræorum."

He who is entering on the study of DIVINITY, will naturally devote his first attention to the scriptures. The original language of the Old Testament is often unknown even to the learned and ingenious; and notwithstanding what some critics and professors have officially observed on the subject, the neglect of it, tho' culpable, is seldom attended with much disadvantage. But the knowledge of Greek is *indispensibly* necessary, if THEOLOGY be pursued as a profession. The prophetic parts will claim the greatest share of attention in the perusal of the Old Testament. Dr. Hurd's Introduction to the study of the Prophecies and Bp. Newton's Dissertations, will be a sufficient guide for subsequent application to them. To illustrate the New Testament, it will be proper to have recourse to Percy's Key to it, to Trapp's Notes, to Locke on the Epistles, and to Mede on the Apocalypse. With these assistances, the student, who is not deficient in natural ability, will make a competent proficiency, even tho' he should totally neglect those myriads of treasises, which have ren-

dered the body of divinity, as it is called, enormous beyond comprehension. [Knox's Essays.]

The following publications claim a high degree of attention.

Gisburne on the Duties of the Clerical Profession, 2 vol. The Charges of Archbishop Secker, 8vo. 6*s*. 6*d*. Claude's Essay on the Composition of a Sermon, with 100 Skeletons, by Simeon, 2 vol. 8vo. 12*s*. 6d. 1796. Mosheim's Ecclesiastical History, by Maclaine, 6 vol. 8vo. 1*l* 10*s*. Jortin's Remarks on Ecclesiastical History, 4 vol. 8vo. 1*l* 4*s*. bound Cruden's Concordance to the Bible, 4to. 1*l* 8*s* boards.

MEDICAL SCIENCE.

The influence of this part of science may be rendered highly beneficial to mankind, by the means which it affords us of alleviating the diseases incident to our nature. Every person of humanity and benevolence must sincerely wish to lessen or remove the miseries of his fellow-creatures; and those which arise from the imperfection of our nature would certainly merit and claim the greatest share of his attention. The frequency of their occurrence and their universal prevalence, must in a peculiar manner engage the attention of all those interested in the welfare of their fellow-men. While the accidents of hard fortune are felt in a superior degree only by few, desease attends on all, and self-love prompts us to search for it's remedy. Moreover, a person must always feel a state of uneasy dependency, when he is ignorant of the laws of his own constitution, and is in consequence obliged to commit the care of his health to a person, whose knowledge and abilities he has no means of appreciating. But besides the independance which the general diffusion of medical know-

ledge would tend to impart to mankind, it must also be accompanied with another beneficial consequence, namely, the abolition of a class of labourers in society, unproductive of good, and abundant in evil. The general effect which physicians produce upon society, is extremely detrimental. This class of men is, by far, the most ignorant of all the learned departments of society, which seems to arise chiefly from this cause, that ignorance in this profession is little, if at all, liable to detection. The abilities and knowledge of the lawyer must be displayed before, and can be appreciated by thousands. The solemn divine, holding forth before the most stupid and ignorant of the community, whether in the centre of a metropolis, or in the outskirts of an empire, must, at least, be able to find words to say. But the physician can stagger on from one degree of ignorance and stupidity to another, and preserve, at the same time, the esteem and veneration both of the ignorant and of the enlightened, who in the present state of society are equally capable of appreciating his merits. It is not to be presumed then, that this learned and truly respectable body of men, have been so blind to their great ultimate object, as to overlook this peculiar advantage offered to them. So far from it, they have almost to a man, availed themselves of it, and have taken special care never to employ any degree of superfluous abilities in the exercise of their profession. They have in this particular part of their policy, adapted the maxim which pervaded so universally the economical part of mankind, never to sell at an undervalue, and hence, since learning and ability, were they to employ them in the exercise of their profession, must go for nothing, they have act-

ed, as the generality of mankind would in similar situations, in a truly economical manner, and so far from wasting, have never made use of either of these articles. Could mankind be convinced, that not one physician in five hundred does, or ever can, be of any real service to his patient, surely they would, then, be inclined to doubt the foundation of that esteem and confidence, with which they have been accustomed to look to the medical profession. Perhaps this remonstrance may have still more weight when it is known, that the person who offers them to the world, has, himself, been educated in the common routine of medical instruction, and has, moreover, made the science of medicine his particular study. It is my earnest wish, that every individual in society may become a scientific physician. The observations here offered must not be understood to be applicable to the surgical department of medicine. This part of the healing art, is exercised, almost entirely, upon those diseases which are evident to our senses. Every individual is, therefore, capable of judging of the existence of surgical diseases, and, in a great measure, of their degrees of danger and inveteracy. Hence, there is little room for deception in the exercise of this part of the medical profession. It's practice is generally performed in the presence of a number of spectators, and the effects to be produced, together with the nature of the means employed, are generally known. For these reasons, surgery has far outstripped medicine in advancing towards perfection. Every individual, who receives any portion of what is termed a liberal education, should be acquainted with the general principles of medical science. In no other department of

human society, has there occurred an instance of such prejudice and self interest, as one which happened a few years ago in that of medicine: I allude to the rejection and neglect of the Brunonian system. In this profound and accurate work, the various facts relating to animation, which had been isolated, and in consequence either altogether useless, or subject to the arbitrary will and misrepresentation of those who thought proper to employ them, are by by a careful induction reduced to the heads to which they properly belong, and their general nature thereby appreciated. The causes of animation are hence elucidated, as far perhaps as the human mind can penetrate. The advatages which might be derived from this medical system is incalculable. By it the medical art is reduced to a few simple principles, which every person may easily comprehend and with safety apply to the cure of diseases,. Brown, however, the immortal benefactor of the human race, lived in poverty and neglect, and his system is seldom mentioned except in terms of affected contempt and disapprobation in all the medical schools with which I am acquainted. Our systems of philosophy have changed by the discoveries of Newton; yet medicine, even after the labours of a Brown, remains nearly in the same state of imperfection in which it existed in the days of Hypocrates or Galen. [A. Cowan, M. D.] The late BONNEL THORNTON, whose turn for wit and humour was only equalled by the strength of his understanding, used frequently to entertain himself and his friends at the expence of the college of physicians; conceiving he had a right, as he was himself bred to the profession of physic. The formal wig worn by his fraternity was frequent-

ly the object of his mirth; and tho' knowledge and merit could not escape his discernment, one might almost have thought, from his manner of treating the physical wig, that he thought the success of physicians depended on the quantity of hair on the outside of the head, and not on any knowledge or skill within. Mr. Thornton was once confined to his bed by a fever, which greatly alarmed his most intimate friends, who did not conceive he could recover, from the simple medicines he employed. They urged him incessantly to call in the assistance of a physician; and he at length declared that he would the next day have a consultation of them. This declaration caused much happiness among his friends, and they were determined to be punctual in their attendance at the appointed time, that they might be certain that Thornton did not omit any circumstance which might be necessary for the doctors to know. The friends attended accordingly the next day, and found Mr. Thornton sitting up in his bed, with the curtains open; and looking gravely at three tye-wigs, placed in order upon blocks between the bed-posts. "What is the meaning of this?" exclaimed the friends. "Why, this is the consultation of Physicians," answered Mr. Thornton, "which you made me promise to have, and you see I have kept my word." "It is astonishing that you can be so merry," cried one of the company, "on an occasion in which your life is in danger?" "I beg you will excuse me," returned Thornton, "for I know what I am about. It is allowed to be more than an even chance against a patient when he calls in a consultation of the perriwig-pated fraternity; I am willing to lessen the hazard, by taking the assistance of so

much of the doctor as may do me good, and avoiding that which alone occasions the danger." "I do not understand you?" answered the friend. "The sight of the doctor," replied Thornton, "has, I am persuaded, cured many a patient: this I have completed in the three figures before me: the danger lies in the doctor's physic; this I have avoided, by the present consultation. Be at ease, my friends; Nature is the best Physician, and she employs few medicines; the assistance she wants I shall give, and save my money and my life." The friends were far from being satisfied; yet Bonnel Thornton soon recovered, and for many a year joined them in laughing at the *consultation of physicians*. The student in physic is commonly introduced to the knowledge of it by a public lecture, who superintends, or at least directs, his course of reading. Natural and experimental science, in all their ramifications, are in some degree requisite to his further advancement. These alone will indeed render him ingenious in his closet, but will avail little at the bedside without other aid. To these must be added a most accurate observation of the human frame in all it's vicissitudes of health, disease, and convalescence. The reading of cases accurately delineated, is found to be the best succedaneum, where actual practice and observation are precluded. System is in general insufficient and delusive. [Dr. Knox's Essays.] The following are excellent works: Turton's Medical Glossary, 4to. 1*l* 1*s*. bds. Crosby. Dr. Gregory's Observations on the Duties and Offices of a Physician. 8vo. 5*s*. Dr. Percival Medical Ethics; or, a Code of Institutes and Precepts adapted to the Professional Conduct of Physicians and Surgeons, 8vo. 5*s*. bds. 1803. Bickerstaff. Parkinson's Hospital Pupil, or an Essay on Medical and Chirurgical Education 12mo. 3*s*.

bds. Symonds. Dr. Brown's Works, complete, 3 vol. 8vo. 1*l.* 1*s.* bds. Symonds. Darwin's Zoonomia, or Laws of Organic Life, 4 vol. 8vo, 1*l* 16*s* Johnson. Cullen's Practice of Physic, with Notes by Dr. Rotheram, 4 vol. 8vo. Van Swieten's Commentaries on Boerhoave, by Cullen, 18 vol. 8vo. Arbuthnot on Aliment, 8vo. 1756. Cheyne's Essay on Health and Long Life, 8vo, 1725. Woodville's Medical Botany, 4 vol. 4to. 274 Plates, 2*l* 19*s* plain; 7*l* 1*s* 6*d* coloured. Phillips.

For the Use of private individuals or families the following medical works will often be found useful. Faust's Catechism of Health, 12mo. Mawman. Parkinson's Villager's Friend and Physician, 1*s.* sewed. Symonds. Parkinson's Medical Admonitions to Families, 12mo. 7*s.* Symonds Hufeland's Art of Prolonging Life, from the German, 8vo, 6*s.* bds. Bell. Willich's Lectures on Diet and Regimen, 8vo, 9*s.* 6*d.* bds: Longman. Beddoe's Hygëia, 3 vol. 8vo. R. Phillips. 1802. Mansey's Practical Physician 8vo. 9*s.* 6*d.* Stratford. Thornton's Medical Extracts, 5 vol. 8vo. Sir John Sinclair's Code of Health and Longevity.

ANATOMY.

Well-conducted lectures on the construction and movements of the animal machine, would enable the hearer to avail himself of other aids. It is in this view that lectures on the different branches of physics are capable of being rendered exceedingly useful. Books and engravings alone may answer one good purpose. The grossness of medical impostures may often be detected by a quantity of precise information, which to the whole of physiology does not, perhaps, bear a much greater proportion than the first four rules of arithmetic to the whole science of quantity. Now more than this proportion may be obtained by reading, I regret my inability to name any English work calculated exactly for conveying it. Treatises designed to guide the judgment of the physician, or the knife of the surgeon, it is ob-

vious will not answer. But not to leave the uninformed wholly without directions, I shall name the Compendium of Anatomy for the Use of Students, 2 vol. 8vo. Davies. Mr. John Bell's unfinished Anatomy of the Human Body, recommends itself, by a spirit unusual in this class of publications, but effervescing occasionally with too great briskness. The learned reader may apply with most advantage to Dr. Soemmerring's classical volumes De Corporis Humani Fabricâ, in which constant reference is made to the most accurate figures. A Compendium of Anatomy, 3 vol. 4to by the very accurate Mr. Andrew Fyfe, might have been mentioned as the best adapted collection, if attention to cheapness apparently had not caused the engravings, to be too little laboured. The Morbid Anatomy, and the Illustrative Series of Engravings, by Dr. Matthew Baillie, 4to, will, both together, afford much instruction concerning changes of our organs, whose causes ought to be universally understood. Tho' in many situations intelligent curiosity may not at present be able to obtain complete satisfaction, such helps as can be had, ought not to be disdained. It is no barren course with a single prize at the goal. At every distance will be found some recompense for exertion; and the recompenses will continually increase in value, if further advances be made. [Dr. Beddoes's Hygëia, vol. i, 46.] The following recent compilations well deserve insertion.

Hooper's Anatomist's Vademecum; containing the Anatomy, Physiology, Morbid Appearances, &c. of the Human Body; the Art of making Anatomical Preparations, &c. 8vo. 9s. bds. Murray. Anatomia Britannica; or a System of Anatomy and Physiology, 3 vol. 12mo. 18s. bds. Scott.

THE MILITARY PROFESSION.

Young men designed for the army and navy should never be educated in private families. The domestic habits, and the learned leisure of private education, are unsuited to them; it would be absurd to waste many years in teaching them the elegancies of classic literature, which can probably be of no essential use; it would be cruel to give them a nice and refined choice of right and wrong, when it will be their professional duty to act under the command of others; when implicit, prompt, unquestioning obedience must be their first military virtue. Military academies, where the sciences practically essential to the professions are taught, are the best situations for all young sailors and soldiers; because for them strict discipline is the best education. We do not here enquire how far these professions are necessary in society; it is obvious, that in the present state of European politics, soldiers and sailors are indispensible to every nation. We hope, however, that an inclination for peace may, at some future period in the history of the world, succeed to the passion for military glory; and in the mean time, parents should never trust a young man designed for a soldier, to the care of a philosopher, even if it were possible to find one who would undertake the charge. [Passim.] Old Horace very truly observes, that whatever mad frolics enter into the heads of Kings, it is the common people, (that is, the honest artizan, and the industrious tribes in the middle ranks, *unoffended* and *unoffending*) who chiefly suffer in the evil consequences. When one considers the result which attends even victories, one cannot help being a little shocked at the exultation which they occasion. Every eye spar-

kles with delight; every voice is raised in announcing the happy event. And what is the real cause of all this joy? and for what are our windows illuminated, bonfires kindled, bells rung, and feasts celebrated? We have had a successful engagement. We have left a thousand of the enemy dead on the field of battle, and only nine hundred of our countrymen. Charming news! it was a glorious battle! But before you give a loose to your raptures, pause; and reflect, that to every one of these nineteen hundred, life was no less sweet than it is to you; that to the far greater part of them there probably were wives, fathers, mothers, sons, daughters, sisters, brothers, and friends, all of whom are bewailing that event which occasions your silly and brutal triumph. The whole time of war ought to be a time of general mourning, a mourning in the heart. [Dr. Knox's Essays, No. 100.] Men are all brethren, yet they worry each other, The savage beasts are less cruel than they. Lions never make war with lions, nor tigers with tygers; but only with creatures of a different species. Man, alone, in opposition to his reason, does that, which irrational animals have never done. But what occasion for all these wars? Is there not land in the world more than sufficient to employ the labour of all mankind? What extensive tracts lie desert, which can never be occupied! [Telemachus, b. 17.] The late Earl of Chatham has said, in a Letter to his nephew Thomas Pitt, esq., when at the University, "I am very glad you have taken a fencing master: that exercise will give you some manly, firm, and graceful attitudes: open your chest, place your head upright, and plant you well upon your legs. As to the use of the sword, it is

well to know it: but remember, my dearest nephew, it is a science of defence: and that a sword can never be employed by the hand of a man of virtue, in any other cause."

ACCOMPLISHMENTS IN GENERAL.

A proper degree of attention should always be paid to what are called the accomplishments of life, but they should never supercede for a moment more useful studies. Every occupation should be estimated according to it's future utility, and as those points which are deemed essential to the demeanour of a gentleman should not be neglected, and demand but a small portion of time to acquire, a pupil should be early and properly attended by the best masters in the several departments of fencing, military exercise, horsemanship, and dancing. These accomplishments, and the art of swimming, give a suppleness to the limbs, a grace of action, and an elegance of address which always obtain the favourable prepossession of the company to whom a person may be introduced; but talents and virtues complete the conquest of affection, and convert the passing applause of the human race into a solid and durable esteem. A copious selection from the excellent letters of Lord Chesterfield to his Son, are always before my pupil, which inspire him with a laudable desire of uniting to the character of a man of knowledge, the accomplishments of a gentleman. The object of instruction is to make men better, not to embrute them. Whatever, therefore, is deemed auxiliary to such a disposition, should be encouraged. No evil can arise from an easy address, or from agreeable manners. Politeness is the handmaid of civilization, perhaps, it may be shewn to be attendant on virtue. What

ever means, therefore, are judged expedient to furnish the opportunity of exhibiting this amiable quality, are commendable, and ought to be adopted. I allude, in this instance, to genuine politeness, not to that false affectation of good manners, which consists in foppery and a servile imitation of the servile manners of the great, and of men of honour, as, by a strange perversion of language, they are improperly called. The term GREAT MAN, is so equivocal, says Dr. Beattie, that I will have nothing to do with it. The vilest scoundrel on earth, if possessed of a crown or a title, immediately commences great man, when he has with impunity perpetrated any extraordinary act of wickedness; murdered fifty thousand men; robbed all the houses in half a dozen provinces, or dexterously plundered his own country to defray the expence of a ruinous war, formed to satiate his avarice. The term HONOUR is also of dubious import. According to the notions of the present times, a man may sell his country, murder his friend, pick the pocket of his fellow sharper, and employ his whole life in seducing others to vice and perdition, and yet be accounted a man of honour; provided he be accustomed to speak certain words, wear certain clothes, and haunt certain company. To the pernicious influence of this unnatural law of honour the just sentiments of Archdeacon Paley may be applied. "It is a law," says he, "which, being constituted by men occupied in the pursuit of pleasure, and for the mutual convenience of such men, will be found, as might be expected from the character and design of the lawmakers, to be, in most instances, favourable to the licentious indulgence of the natural passions. Thus, it allows of fornication, adultery, drunkenness, prod-

igality, duelling, and revenge in the extreme; and lays no stress upon the virtues opposite to these."

If any additional supports were necessary in behalf of the argument that bodily accomplishments may be considered as a component part of the happiness and perfection of man, we might introduce the powerful authorities of Mr. Locke and Dr. Watts, who have applauded this mode of instruction, when limited to such views. The latter was a man of singular piety, modesty, and uprightness; the former was as much distinguished for the elegance of his manners, as for his knowledge of the world, and his deep insight into the powers of the human mind. [H. R. Yorke, esq.]

TASTE

is that power, which the mind possesses, of relishing the beauties found in the works of nature and art.

> Say what is Taste, but the internal powers,
> active and strong, and feelingly alive
> to each fine impulse? a discerning sense
> of decent and sublime, with quick disgust
> from things deform'd. [Akenside.]

It has been alleged that Taste is a natural talent, as independent of art as strong eyes, or a delicate sense of smelling; and, without all doubt, the principal ingredient in the composition of taste is a natural sensibility, without which it cannot exist; but it differs from the senses in this particular, that they are finished by nature; whereas taste cannot be brought to perfection without proper cultivation: for taste pretends to judge not only of nature, but also of art; and that judgment is founded upon observation and comparison. Tho' nature should have done her part, by implanting the seeds of taste, great pains

must be taken, and great skill exerted, in raising them to a proper pitch of vegetation. The judicious tutor must gradually and tenderly unfold the mental faculties of the youth committed to his charge. He must cherish his delicate perception; store his mind with proper ideas; point out the different chanels of observation; teach him to compare objects; to establish the limits of right and wrong, of truth and falsehood; to distinguish beauty from tinsel, and grace from affectation; in a word, to strengthen and improve by culture, experience, and instruction, those natural powers of sensibility and sagacity, which constitute the faculty called taste, and enable the professor to enjoy the delights of elegant learning. [Goldsmith.] I do not call taste a species of judgment, altho' it be actually that part of judgment, whose objects are the sublime, beautiful and affecting; because this kind of judgment is not the result of reason and comparison, like a mathematical inference, but is perceived instantaneously, and obtruded on the mind, like sweet and bitter on the sense, from which analogy it has borrowed the name of *taste*. [Usher's Clio.] Taste presides with supreme authority over all the elegant arts. There are none so low in their subserviency to the uses of mankind, as not to afford subjects for it's decisions. It extends it's influence to dress, furniture, and equipage; but presides, as in it's most distinguished and eminent provinces, over poetry, eloquence, painting, architecture, sculpture, and music; because among them genius takes it's unbounded range, and exerts it's fullest power. Taste is derived from the concurrent voices of men of various ages and nations, possessed of enlarged and cultivated understandings,

who have surveyed the works of genius with close attention, and have recorded in animated descriptions the impressions made upon their minds. This authority has stamped it's approbation upon works which have obtained the general applause of all ages and countries, and must still continue to produce a similar effect, so long as the intellectual powers of man remain the same; so long as his imagination and his sensibility are capable of being affected by all which is beautiful, pathetic, and sublime.

The advance of national taste is similar to the progress of taste from childhood to manhood. When the attention of an unpolished people is first directed to works of art, they are captivated by mere novelty; and the rudest paintings and most unpolished verses obtain their applause. In proportion as superior efforts of genius are made, the opinion of the judicious part of the public, at least, becomes more correct; and what at first delighted is finally rejected with disapprobation. As soon as comparisons are made between different productions of the same kind, true taste is brought into action, it's decisions are called for, and the justness of it's discriminations is universally acknowledged. The polished cotemporaries of Horace blushed at the praises which their ancestors had bestowed on the rude dialogues of Plautus, and were charmed with the polite and elegant comedies of Terence. The lower orders of society are disqualified from deciding on the merits of the fine arts; and the department of taste is consequently confined to persons enlightened by education, and conversant with the world, whose views of nature, art, and mankind, are enlarged by an extensive range of observation, and elevated far above gross

ignorance and vulgar prejudice. [Mr. H. Kett.] The general rudiments of taste are to be acquired first by reading books, which treat professedly on the subject. Secondly, by selecting and explaining beautiful passages in Shakespear, Johnson, Sterne. And lastly, by exhibiting and explaining prints of beautiful objects, or casts of the best antique gems and medalions. Authors have divided the objects of taste into the sublime, the beautiful, and the new; but another sect of inquirers into this subject have lately added the *picturesque;* which is supposed to differ from the beautiful by it's want of smoothness, and from the sublime, from it's want of size. [See Essay on the Picturesque, by U. Price, esq.] Others have endeavoured to make a distinction between beauty and grace; and have esteemed them, a kind of rivals for the possession of the human heart. By GRACE may be defined beauty in action; for a sleeping beauty cannot be called graceful, in whatever attitude she may recline; the muscles must be in action to produce a graceful attitude, and the limbs to produce a graceful motion. The supposed origin of our ideas of beauty acquired in our early infancy from the curved lines which form the female bosom, is delivered in Zoonomia, vol. 1, sec. xvi, 6. [Dr. Darwin's Plan of Education.] Taste is one of our faculties which is the slowest in it's progress towards maturity; and yet may receive some improvement, during the course of domestic education. Compare with your pupils two poems on the same subject, or two passages. Take the lead in pointing out beauties and blemishes, in the simplest manner. After some time, let them take the lead under your correction. You cannot have a better book for that

exercise than the Spectator. A pleasing vein of genteel humour runs through every one of Addison's papers, which like the sweet flavour of a hyacinth, constantly cheers, and never overpowers. Steele's papers, on the contrary, are little better than trash: there is scarcely a thought or sentiment which is worthy to be transferred into a common-place book. My pupil reads a few papers daily, without a single observation on my part. After some time, I remark to him the difference of composition, which, in the course of reading, becomes more and more apparent. The last step is to engage him in distinguishing the two authors. He at first made awkward attempts; from frequent trials, he began to distinguish. Now he will almost in the first period, cry, "Foh! this is Steele, let us have no more of him." [Lord Kaims's Loose Hints.] If we wish to be directed to authors, who were eminent for correctness of taste, we may select in painting Fresnoy, Vasari, and Reynolds: in music, Burney; in eloquence, Cicero and Quintilian; and in poetry, Horace, Pope, Gray, and the Wartons. These were critics, who had the singular merit of teaching that art in which they were themselves distinguished; and their own works are an example and an illustration of their rules. [Mr. H. Kett's Elements.] It is no wonder that the common people want elegance and taste. It is not from them that we are to seek the natural bias of the soul. The necessaries of life, when they are to be procured by an individual for a wife and numerous young children are procured by vast labour and hardship. Labour requires strained, forced, and violent motions. This race of men walk not for pleasure, but to perform journeys of necessity. They

take the advantage therefore of bending the body forward, and assisting their motion by a sling with their arms. Their low station, their wants, and their drudgeries, give them a sordidness and ungenerosity of disposition, together with a coarseness and nakedness of expression; whence their motions and address are equally rude and ungraceful. This dishonoured state of man is the offspring of his wants, and of the miseries which yoke him down a slave to the glebe which he tills, and depress together his mind and his body. [Clio.] See further on this subject, Mr. Knight's ingenious work called "An Analytical Inquiry into the Principles of Taste," 8vo. 8*s* 6*d* bds. White.

DRAWING

is not only an accomplishment the most elegant, agreeable, and ornamental, but, at the same time that it is the foundation of painting, is of the utmost utility to the sculptor, the civil and naval architect, the engraver, the engineer, the mathematician, and navigator. It also assists the gardener, the cabinet-maker, the weaver, &c. In short, there is scarcely a branch of civil society which is not indebted to it, from the maker of the iron rails before our house, to the tea-urn on our table. To it we are indebted for representations of those elegant remains of antiquity which have contributed so much to the advancement of our knowledge of fine form. Volumes of verbal description will not convey so true an idea of an object, as the slightest outline. Hence the source of much of our knowledge in antiquity, of which language could convey no adequate idea. To be able on the spot to make a sketch of a fine building, beautiful prospect, or any curious production of na-

ture or of art, is not only a very desirable and elegant accomplishment, but in the highest degree entertaining. To treasure up whatever may occur in our travels, either for future use or to illustrate conversation, to represent the deeds of former ages, to preserve the features of our most valued friends, has made this art not only one of the highest embellishments of our nature, but the delight of all ages. The greatest writers have united to praise, and empires to encourage it. It has been in the highest degree morally useful; and where it has flourished, conferred honour on the country. [Mr. E. Dayes in Mr. Tilloch's Philosop. Mag. vol. xiv, 219.]

It is impossible to judge accurately of the demensions of bodies, unless we learn also to know their figures, and even to imitate those figures; for this imitation is founded on nothing else but the rules of perspective, and we cannot estimate the extension of bodies by their appearance, unless we have some knowledge of those rules. Children, being great imitators, all attempt to design; I will have my pupil cultivate that art; not so much for the art itself, as for the sake of giving him a good eye, and a flexible hand. I will take care that he shall rarely imitate imitations. He should have before his eyes the original itself, and not the paper representing it. Thus he should design a house from a house, a tree from a tree, a man from a man, that he may be accustomed to observe minutely and accurately the appearances of bodies, and not take false and artificial imitations for those which are true and genuine. I would even discourage him from endeavouring to trace any thing from memory, till by frequent and repeated observations, it's figure should be strongly imprinted

on his imagination; lest he should otherwise, by substituting some fantastic image instead of the real one, lose the knowledge of proportion, and a taste for the genuine beauties of nature. [Rousseau, b. 2.]

If my pupil wishes to become a painter, he does not commence his career by a dry study of lines; he does not "imitate imitations;" he paints from nature. At the same time that he may not lose the advantages derived from the labours of past ages, he submits his productions to a master of the art, who may correct his errors and accelerate his improvement. So in electricity, chemistry, &c. he begins by experiment, under the eye of a master, and thence either deduces his own general rules, or confirms those of others. [Northmore.]

Numerous small pamphlets, containing outlines and finished figures and landscapes, are to be had in almost every bookseller's shop; the prices from 4*d* to 2*s* 6*d*. Of a more respectable kind are Orme's Rudiments of Landscape, Drawing and Perspective, 23 plates 1*l* 11*s* 6*d* stitched. Characters of Trees, by Laport, in numbers at 10*s* 6*d* each. Smith and Byrne's Select Views in Italy, in numbers at 12*s* each. Hill's Figures of Cattle, in numbers, 25*s* each: Morland's Sketches, in books from 2*s* 6*d* to 3*l* 3*s* each. Orme.

The Artist's Repository, and Drawing Magazine, 4 vol. 8vo. Taylor. Laresse's Art of Painting, 4to, 1*l* 1*s*. De Vinci on Painting, 8vo. Tingry's Painter and Varnisher's Guide, 8vo, 12*s* bds. Kearsley. Walpole's Anecdotes of Painting in England, 5 vol. 12mo, 1*l*. Richardson's Works, intended as a supplement to Sir Horace Walpole's Anecdotes, with some Portraits by Worlidge, 4to, 1792. This book is said to have given Sir Joshua Reynolds his taste and fervour for painting. Sir Joshua Reynold's Works, with his Life, by Malone, 3 vol. 8vo. 1*l* 1*s* bds. Fresnoy's Art of Painting, translated into English Verse, by Mason, with Annotations, by Sir Joshua Reynolds, 4to. Fuseli's Lectures on Painting, thin 4to, bds.

12*s*. Pilkington's Dictionary of Painters, with Additions by Mr. Fuseli, 2*l* 2*s* bound. Johnson. Gilpin's Essay on Prints, 12mo. Gilpin's Picturesque Tour in the West of England, 8vo. 1*l* 5*s*. Cadell.

On PERSPECTIVE, the simplest and most familiar books are by Ferguson, 6*s* bds, and Dr. Priestley, 5*s* 6*d*. Edwards's Practical Treatise on Perspective, on the Principles of Dr. Brook Taylor, 4to, 1*l* 11*s* 6*d* bds, 1806, is a complete work, forming a happy medium between those early writers on the subject, whose rules were drawn from observation only, and those later writers, Ubaldi, Emerson, and Taylor, whose rules were deducted from abstruse mathematical principles. Wood's Six Lectures on the Principles and Practice of Perspective, as applicable to Drawing from Nature, 77 pages, with 8 plates, 1*l* 15*s*, is accompanied with a Mechanical Apparatus, and a Case suitable to the size of the volume. The object of the last writer is exceedingly different from the former, as no recourse is had to geometric methods. Mr. Wood has endeavoured, with success, to lead the pupil to the practice by the simplest means; and the work will be found of singular use from it's perspicuous plan and arrangement. Alston's Hints to Young Practitioners in the Study of Landscape Painting, 7*s* boards, contains plain instructions for drawing landscape, management of colours, &c.

MUSIC

may be considered one of the most useful means which we possess of improving and cultivating the mind of man, and by far the most powerful in softening the heart, and rendering it susceptible of every fine and more exalted sentiment. Nor can music be called merely an art calculated to please and delight the senses alone, for certainly it's execution employs the mind much more than the body. To instance the many surprising effects produced by music over the minds of men, even the most rude and barbarous, would be superfluous and impertinent. The delight which music imparts to the mind, can be en-

joyed in every period of life, from the earliest infancy to the total decay of all the vital powers. No art affording so much felicity and happiness can be so easily cultivated and attained. The influence of this part of education over the mind of the female sex, must be, and certainly is, highly beneficial. Their hearts are hence in a particular manner cultivated and refined, and those sensations are exercised and strengthened in their bosoms, which render them peculiarly lovely and amiable. Many females, however, are entirely deprived of the advantages resulting from this part of education.

It is sincerely to be lamented and regretted, that the truly respectable sect of quakers should forbid the cultivation and practice of music in their societies; and it is wonderful that the effects which already have resulted from this prohibition, have not yet convinced them of the impropriety and pernicious tendency of their unreasonable prejudice against music. Such indeed are the effects produced by the total neglect of this divine art among the society of friends, that the tones of their voice in reading and public speaking are so harsh and discordant as scarcely to be endured by a person of a nice and delicate musical ear. The worship of the catholic church, and that of the quakers, are in this respect as opposite as possible. The catholics chant their worship, and it's influence is thereby augmented.

The bravery and independence of the Swiss are universally known, and in no people, perhaps, is the influence of pathetic music so powerfully exerted. The inhabitants of many other mountainous countries afford striking examples of the same kind. No people are more possessed of true independence of

mind than the inhabitants of the Highlands of Scotland, and in no country are the softer sensibilities of the heart more cultivated and indulged. I have never yet known an instance of a person capable of enjoying all the ecstasy of musical delight whose heart was not warm, tender, and benevolent. [Dr. Cowan.] Tho' the great composer, Handel, has been supported by royal partiality, he is generally neglected for the more modern, and according to the opinion of too many young women, the more captivating style of the Italian school; greatly perhaps, in some cases, to the prejudice of the morals of it's votaries; for if we are to believe Fenelon, music which is made the vehicle of passion and love is very dangerous. No one will deny that most of the Italian airs breathe nothing but love; and therefore cannot but make too strong an impression on the minds of those young women who are mistresses of the language and the art; for the words are often as seductive as the music. To make a tolerable proficiency in instrumental music, the scholar ought to commence the study at the early age of six or seven years; not less than one or two hours every day must be alloted to it, in order to become a proficient; but to be a capital performer, it must be made the business, not the amusement of a person's life. It is lamentable that we now never hear such pieces performed as Corelli's Sonatas. The chastity and dignity of his compositions fill the mind with a rational and impressive delight, while the confused movements of the greater part of modern music surprises us only by the rapidity and difficulty of the execution, without catching the ear, or affecting the heart. The shepherd's pipe upon the moun-

tain is often far more captivating than the clang of modern choruses. On the whole, music may be considered an innocent and delightful amusement, adapted for filling up many vacant hours, which young people might otherwise employ in pursuits tending to vitiate the mind, or trifle away with frivolous companions. To most people, nothing is more pleasing than little family concerts, with occasional dancing. "In singing," says Rousseau, "you should endeavour to render a child's voice clear, equal, easy, and sonorous; and his ear susceptible of measure and harmony; but nothing more. Imitative or theatric music is above his capacity. I would not have him make use of words which he cannot understand, or which are not suited to his years. I would endeavour to compose songs on purpose for him, adapted to his situation, interesting, and simple as his ideas. At first, instead of reading music, a tune might be heard, for sounds are more faithfully conveyed to us by the ear than by the eye. To understand music, it is not sufficient to be able to play or sing; we must learn to compose at the same time, or we shall never be masters of this science. Exercise your little musician at first in regular, harmonious periods; join them afterwards together by a very simple modulation, and at length mark their different relations by correct punctuation, which is done by a good choice of stop and cadence. Above all things, avoid what is fantastic and whimsical, nor affect the pathetic in your expression, but choose a melody always easy and simple, always naturally arising from the chords essential to the tune, and indicating the bass in such a manner as that it may easily be perceived and followed; for, to form

the voice and ear, the harpsichord is the best instrument to sing to."

Amateurs should possess Dr. Busby's Dictionary of Music, 6*s* bds. Burney's History of Music, 4 vol. 4to. 7*l*. Webb's Enquiry into the Beauties of Painting, Poetry, and Music, 12mo. It would be almost invidious to select from the compositions, in this science. Jacksons Hook, and Holder's Songs may, however, be mentioned, as containing some of the most beautiful of simple plaintive airs.

DANCING.

The design of this accomplishment is to obtain a graceful carriage, and a pleasing address on all occasions. It has been said, that "no person can either sit, stand, or walk, well, unless he dances well." This is certainly carrying the matter too far. There are some who never so much as learned a step, who both sit, stand, and walk with more grace than some professed dancing-masters. This art, however, frequently teaches young people to walk with firmness and ease, to enter a room gracefully, to incline the head or body, even when sitting and conversing, without any distortion; and removes that awkward stiffness, which in country people, who have not had the advantages of a good education, is so apparent. To obtain great perfection in this art, tho' it be necessary for professional performers, would be a shameful waste of time, which might be infinitely better employed in mental attainments.

POLITENESS.

There is a fascinating manner in the address of some people, which almost instantly conciliates the good-will, and even the confidence of their acquaintance. Machiavel in his history of Castruccio Cas-

tricani observes, that his hero could assume such openness of countenance, that tho' he was known to be a man practised in every art of fraud and treachery, yet in a few minutes he gained the confidence of all whom he conversed with; they went away satisfied of his good will towards them, and were betrayed to their ruin. This enviable address, which may be used for good purposes as well as bad ones, is difficult to analyze; it may possibly consist simply in a countenance animated with pleasure at meeting and conversing with our acquaintance; and which diffuses cheerfulness by pleasurable contagion into the bosoms of others; and thus interests them in our behalf. It is not the smile of flattery, nor the smile of self-approbation, nor the smile of habit, nor of levity; but it is simply an expression of pleasure, which seems to arise at the sight of our acquaintance; and which persuades them, that they possess our love, for which they barter their own in return. However this conciliating manner may have been used, as above related, for bad purposes, it probably proceeded originally from friendliness and openness of heart, with cheerful benevolence; and that in those, who have in process of time become bad characters, the appearance of those virtues has remained, after the reality of them has vanished. What then is the method by which this inchantment of countenance can be taught? certainly by instilling cheerfulness and benevolence into the minds of young people early in life, and at the same time an animation of countenance in expressing them; and tho' this pleasurable animation be at first only copied, it will in time have the appearance of being natural; and will contribute to produce, by association,

the very cheerfulness and benevolence, which it at first only imitated. This is an observation to which those who have the care of young children should closely attend. Next to the winning manners above described, the ART OF PLEASING IN CONVERSATION seems to consist in two things; one of them *to hear well;* and the other to *speak well.* The perpetual appearance of attention, and the varying expression of the countenance of the hearer to the sentiments or passions of the speaker, is a principal charm in conversation; to be well heard and accurately understood encourages our companions to proceed with pleasure, whatever may be the topics of their discourse. To speak agreeably, in respect to manner, consists in a voice clear, yet not loud; soft, yet not plaintive; with distinct articulation, and with graceful attitudes rather than with graceful actions; as almost every kind of gesticulation is disagreeble. In respect to the matter, it should be such, as coincides with the tastes or pursuits of those, to whom the conversation is addressed. Hence it will appear that to hear well, and to speak well, requires an extensive knowledge of things, as well as of the tastes and pursuits of mankind; and must therefore ultimately be the effect of a good education in general, rather than a particular article of it. There are, however, faults to be avoided, and cautions to be observed, which should be pointed out to young people. Of these I shall mention, 1, that whenever the thirst of shining in conversation seizes on the heart, the vanity of the speaker becomes apparent; and we are disgusted with the manner whatever may be the matter of the discourse. 2, That it is always child-

ish, and generally ridiculous, when young people boast of their follies, or when they accuse themselves of virtues. 3, They should be apprized, that there is danger in speaking ill even of a bad person; both because they may have been misinformed, and because they should judge their neighbours with charity. A friend of mine was once asked how he could distinguish, whether the lady, whom he meant to address, was good tempered; and gave this answer. "When any dubious accusation is brought in conversation against an absent person; if she always inclines to believe the worst side of the question, she is ill-tempered." There are some nice distinctions on this subject of good nature in Lady Pennington's Advice to her Daughters, which are worth the attention of young ladies. 4, Strong asseverations, or a kind of petty oaths such as "upon my honour;" appealing to others for the truth of an affirmation; are always wrong, because such strong expressions derogate somewhat from the character of the speaker, as they intimate that a simple assertion, may not be believed. 5, loud laughter, or tittering in short shrieks, as practised by some ladies at cards, are reprehensible. Dignity of character always suffers by being violently agitated at trivial circumstances. 6, a uniform adherence to sincerity in conversation is of the first importance. No artificial polish of manners can compensate for the apparent want of this virtue, nor any acquirements of knowledge for the reality of such a want. Opinions should be given with exact truth, if given at all; but when the characters of others are concerned, they should be delivered with diffidence and modesty. Lastly, a marked disapprobation should al-

ways be shewn to indecency, immorality, or irreligion. In the softer sex, so great is their power in meliorating the characters of men, that if profligacy, infidelity, and debauchery, were universally despised, the morals of the age would be entirely reformed. To these might be added many other observations from various writers, concerning a due respect in conversation to superiors, good temper to equals, and condescension to inferiors; but as young people are not expected to speak with the wisdom, or precision of philosophers; and as the careless cheerfulness of their conversation, with simplicity of manner, and with grace, ease, and vivacity natural to youth, supplies it with it's prinicipal charms, these should be particularly encouraged, as there are few artificial accomplishments, which could compensate for the loss of them. [Dr. Darwin.]

AMUSEMENTS.

The flowers of the field and many little animals are exceedingly beautiful, and the source of particular delight to children. They impart accurate and distinct ideas to their minds, and leave impressions of which the imagination afterwards makes extensive use. Hence appears the propriety of allowing children to play and amuse themselves in the fields, where they may have an opportunity of becoming acquainted with the objects which surround them. They should be left at full liberty to indulge themselves in their observations, and therefore should never be restrained by the presence of persons much above their own age. Liberty is not more dear to human nature at any period than in infancy, and the advantages then derived from it are peculiarly extensive. For this reason I object to that absurd

custom, so prevalent in the great schools in England, of sending teachers and tutors to preside at, and regulate, the amusements of their pupils. Such conduct tends to create in the minds of children cunning, suspicion, and deceit: and to prevent all the advantages which should result from their innocent amusements. No sight gives me more pain, than to see a number of fine cheerful children obliged to walk rank and file under the direction of an ignorant and ill-natured pedagogue, in order, as is said, that they may enjoy the pleasure and advantage of amusement and exercise. Such discipline is peculiarly fitted for bringing up slaves, to be the tools of despotism and for corrupting and perverting altogether the human disposition. I am decidedly of opinion, too, that the number of children which can exercise any amusement together, with the greatest advantage should be few. The children of one family, is, for the most part, fully sufficient to embrace the advantages to be derived from amusement. Besides affording children an opportunity of playing in common, we have it also in our power to encrease the benefits to be derived from their amusements in a variety of other ways. The principal and most evident of these is by allowing them sufficient time for their sports. The common mode of education is in this respect extremely faulty and improper. Children, when even first sent to school, at a very early age, are confined for six hours every day to the school-room, and obliged, during all that time, to attend to objects which are very far from being calculated to please and interest them. The pernicious consequence of this treatment it would be superfluous to enumerate. Parents and teachers ap-

pear not to be in any degree acquainted with the steps by which the mind gradually advances towards maturity and perfection. They never consider that in early life proper amusements afford the principal medium through which the mind can be cultivated and improved: no means tends perhaps so much to facilitate and expedite the acquisition of ideas, which in childhood is the great object of education. While sensible nature affords to a mind continual novelty, abstract studies should occupy little attention. Children, therefore, for this reason, should be allowed a large portion of time to enjoy their amusements. In proportion to the age of the child, and the progress which his mind has made; such relaxation may be diminished. Infants and very young children, should be allowed to pass most of their time in those exercises and amusements from which they receive great pleasure. Restraint of every kind tends in a particular manner to depress and render miserable the tender minds of infants and children, since they are peculiarly susceptible of the emotions of pleasure and of pain, and since their greatest enjoyment arises from novelty and variety, in those objects which impress their senses. The practice of constituting one boy the CENSOR the tyrant, and even the spy of the rest, is the origin of consequences the most pernicious and destructive. The child invested with arbitrary power, seldom fails to make the most extensive use of it. He thereby becomes cruel, unfeeling, and malicious. When he is employed as a spy upon the conduct of his school-fellows, he becomes thoroughly versed in all the little arts of hypocrisy, cunning, and deceit. Those unfortunate children

who are under his power, are no less degraded and debased by his conduct towards them. Hatred, revenge, and a variety of other passions of the like nature, are hence excited in their minds.

There are many amusements and diversions in which children are frequently engaged, the consequences of which are destructive to sympathy, and the finer sensibilities of the mind. One of the most common is that which is enjoyed at the expence of the torture or DEATH OF ANIMALS. That a disposition early perverted, and corrupted by education, can seldom during the state of childhood, be completely reclaimed, no person will deny. But that men whose faculties have attained full maturity, should indulge the propensity of beholding the sufferings and death of innocent animals with satisfaction, seems incredible. Young children, indeed, are not conscious of the sufferings which a nurse teaches them to inflict, yet a child may thus be early initiated in habitual cruelty, the effects of which may ever afterwards produce detrimental consequences upon the mind. But to encourage children capable of reflection and thought, in amusements which consist in tormenting and even destroying, inoffensive and helpless animals, must be attended with consequences extremely pernicious and hurtful. HUNTING, SHOOTING, and exercises of this description, should never be encouraged in children, but always prevented. Such barbarous amusements, in time, render the heart unfeeling and cruel, and altogether destroy those fine affections of human nature which are the source of the highest virtue and purest felicity. The amusement which DRESS affords, is in childhood innocent, and allowable, since it imparts enjoyment;

but to see persons arrived at the age of maturity, particularly delighted with gaudy and splendid dress, evinces weak and imbecile minds, capable only of receiving enjoyment from sensual gratification and vanity. At the same time that I was delighted with the custom prevalent at one time, of clothing children in scarlet wrappers, I was in an equal degree disgusted by observing the same custom so common among the ladies. With regard to the propriety of distinguishing the amusements PROPER FOR BOYS from those adapted for GIRLS, little is necessary to be said. If children be allowed perfect liberty to choose their own amusements and their play-mates, they will soon discover those particulars best calculated to afford them delight, and to improve their minds, and will soon associate themselves with those companions who have the same inclinations. If the dispositions of children be not perverted, they may be allowed full liberty to indulge themselves promiscuously in their amusements without requiring any restrictions or fixed rules to regulate their conduct. In the present erroneous modes of instruction, however, boys and girls may be allowed to play and amuse themselves together until they have arrived at that age when their dispositions are no longer in unison. Boys, at this period, delight in exercises which are too severe and fatiguing for girls to enjoy or even to endure; under these circumstances, therefore, it is altogether improper to join boys and girls together in the same amusement.

It has been alleged by some, that the amusements proper for boys are of a nature altogether different from those best adapted for girls. The amusements of boys, it has been thought, should be such as are

best calculated to promote vigour and strength of body, and that they should in consequence consist of violent bodily exercises. Girls, on the other hand, should in conformity with this opinion, receive their enjoyment from amusements of a gentler nature, calculated rather to excite and indulge the softer and finer sensibilites of the heart, than to invigorate the body by fatiguing exercise. These opinions are founded on the supposition that the destination of the two sexes are entirely different, and that in consequence, to fit each to it's respective duties, it's proper mode of education must be different from that of the other sex and in some measure peculiar. This supposition, by reason of the pernicious consequences which result from it, is one of the most destructive to mental culture and improvement which can enter the human soul. It implies that softness and tenderness of heart are incompatible with that energy of mind and vigour of body which is essential to support the male sex through the many hardships and difficulties to which they are in a more especial manner exposed in life. Surely, the enjoyment of a state of pure felicity cannot depend on insensibility to misfortune and distress where misery is at an end, but must entirely flow from our susceptibility of receiving enjoyment and happiness, or in other words, from sensibility of heart. To devise amusements for children, therefore, calculated to blunt and destroy all their finer feelings, must tend directly to counteract the intentions of an all-wise and benevolent God. [Dr. Cowan.] THEATRIC ENTERAINMENTS performed by boys have been much in fashion, and have afforded much delight to unreflecting parents. There can scarcely, however, be

imagined a custom in all respects more pernicious; for, in the first place, if it taught them to be good actors, I do not know that the acquisition is desirable; but in reality it does not teach them to speak well. The mind must be in some degree cultivated before it can understand an author critically, so as to mark the proper emphasis, and the other graces of elocution. Boys, when they act, are obliged to do it just as they are taught, and are more likely to acquire a bad manner from an awkward imitation of their master, than to adopt one agreeable to their own person, voice, and general deportment. This practice begets a trifling vanity in boys; teaches them to be satisfied with that applause which is reaped without any labour of the mind; in fine, relaxes their attention from severe study, and inclines them to the admiration of foppery and folly. In the last place, the waste of time is an insuperable objection. I have known upwards of two months of the prime of life wasted in preparations for one of these trifling exhibitions, and the attention not only of the performers, but of the whole school engrossed by it; all which time the useful parts of learning were neglected, and the boys, thrown back not less than half a year in their studies. If to SPEAK WELL, be an object in the education of youth, let such a foundation of classical taste and knowledge be laid, as shall enable him to understand critically the authors he is to read, or the sentiments he is to recite. During childhood, let some care be taken that he acquires no improper tone or accent, but let him, before he has attained a critical taste, be taught to read in the plainest and most unaffected manner. And, lastly, let him, at a proper season, hear as many

good speakers as he conveniently can; and then, if any instructions or critical observations be offered to him, he will be able to judge how far they are adapted to his case. All the good speakers with whom I have been acquainted, have, without exception, been formed in this manner. [Gregory's Essays.] Among those dissipated occupations which go under the name of public amusements the exhibitions of the DRAMA, from the beauty of the scenery, and the imitative powers of man, are peculiarly adapted to attract the attention and engage the affections of spectators. So successful have been the joint efforts of poets and actors in their representations of the passions, and the sorrows and felicities which attend on human life, that they have drawn the sympathetic tear from tyranny itself. The history which records the weeping of the tyrant of Syracuse, records no instances of the reformation of this prince; and among the numerous weeping audiences of the celebrated Mrs. Siddons, perhaps there is not one to be found who would drop a tear at the spectacle of real wretchedness, provided the object was totally unconnected with their interest. The design of the poet in the conduct of these pieces is rather to please than to reform; many of them evidently lead to debauch the mind. What good rules for the conduct of life do even the most moral pieces set forth? they are commonly replete with sentiments which war with the useful dictates of philosophy, and would not please if they were not calculated to inflame those propensities which, tho' necessary in their consequences, are in their excess the most opposed to the peace and happiness of the species. The famous lawyer, Prynne, wrote

a thousand pages to shew that stage plays ought not to be licensed in Christian societies: and the elegant Rousseau, tho' no puritan, has taken some pains to prove that the fascinations of the drama must necessarily produce mischievous effects in trading towns. The magistrates of Geneva have always found theatrical performances so destructive to the industry of the inhabitants of that city, that while the ancient government continued, they were never licensed. [Mrs. Macaulay.] The following books would supply a fund of amusement to young People of 14 years of age, and upwards.

Philosophical Amusements or Instructive Recreations for Young People, 1*s* sewed. Johnson. The Pleasing Preceptor, or Familiar Instructions in Natural History and Physics, from the German of Vieth, 2 vol. 12mo. 6*s* bound. Robinsons. Hutton's Translation of Montucla's Edition of Ozanam's Recreations in Mathematics and Natural Philosophy, 4 vol. 8vo. 3*l* 3*s* bds, Kearsley. Friend's Evening Amusements. Friend's Geographical Game, 7*s* 6*d*. Mawman.

MORALS.

THE ONLY LESSON OF MORALITY PROPER FOR CHILDREN, AND THE MOST IMPORTANT TO PERSONS OF ALL AGES, is *never to do an injury to any one.* Even the positive precept of doing good, if not made subordinate to this, is dangerous, false, and contradictory. Who is there who does no good? All the world, even the vicious man, does good to one or other party: he will make one person happy at the expense of making a hundred miserable; hence arise our calamities. The most sublime virtues are negative; they are also the most difficult to put in practice, because they are attended with no ostentation, and are even above that pleasure so flattering to the heart of man, that of sending away others sat

isfied with our benevolence. O how much good must that man necessarily do his fellow-creatures, if such a man there be, who never did any of them harm! [The injunction of doing no one harm, infers that of doing the least possible harm to the community in general; for in a state of society the good of one man necessarily becomes the evil of another.] Rousseau, b. 2. I think it might be proved, that the best PRECEPTS OF MORALITY, INCULCATED even UNDER THE SANCTION OF RELIGIOUS AWE, ARE NOT OF HALF THE EFFICACY IN THE PREVENTION OF VICE, AS A TASTE FOR READING AND SCIENCE. Experience informs us how soon the principles of morality inculcated in childhood are forgotten, or accommodated to the prevailing customs of the world: but if a taste for science be acquired, the affections are then fixed upon a rational object; there is no temptation to allure them from the path of virtue; at least the most powerful of all incitements to criminal amusements is removed, the tediousness of life during the intervals of leisure. [Gregory's Essays.] Plato has observed with great propriety, that THE END OF the EDUCATION and instruction of youth as well as the end government, IS TO MAKE MEN BETTER; and that whoever departs from this rule, however meritorious he may otherwise appear to be in reality, deserves neither the esteem nor the approbation of the public. The greatest erudition is of no value, if unattended with probity. It is worse, it is dangerous to the welfare and tranquillity of society. QUINTILIAN, in his admirable treatise, has laid it down as a rule in forming a perfect orator, that none but an upright man can merit that name, and therefore he

asserts as a necessary qualification, that he should not only speak well, but also possess all the moral virtues. Mr. JUSTICE BLACKSTONE has wisely adopted a similar opinion in his introductory lecture on the study of the law, in which after having enumerated all the qualities of the head, he adds to them those of the heart, as indispensably necessary to form a truly valuable English lawyer, a Hyde, a Hale, or a Talbot. And Dr. BLAIR has, with great elegance and propriety, suggested the same idea as a necessary ingredient in the character of a sublime writer. But this just sentiment is not to be restricted to any particular profession or order of men. The knowledge and practice of morality is the voice of nature, which is unbounded and universal: and however expedient it may be in those whose stations in life, render them objects of imitation or esteem, to perform with the most rigid punctuality every moral duly, it must not be forgotten, that the conviction of the utility of the practice, should make it the common sense and common respect of all mankind.

The GENERAL RULES OF MORALITY are formed by a constant observation of the fitness and propriety of actions in other men. What is fit to be done, and what excites universal applause, not only calls forth our own approbation, but warms us into a spirit of imitation. What ought to be avoided, we discover in the general sentiment of detestation which attends the perpetration of crime. The propriety of the former and the deformity of the latter quickly excite our emulation or abhorrence. We soon establish a general rule for the regulation of our conduct, which receives a full confirmation from the opinion of the rest of mankind. It is thus that the

general rules of morality are formed. They are ultimately founded upon experience of what, in particular instances, our moral faculties, our natural sense of merit and propriety, approve or disapprove of. We do not originally approve or condemn particular actions; because, upon examination, they appear to be agreeable or inconsistent with a certain general rule. The general rule, on the contrary is formed by finding from experience that all actions of a certain kind, or circumstanced in a certain manner, are approved or disapproved of. An amiable action, a respectable action, a horrid action, are all of them actions which naturally excite for the person who performs, them, the love, the respect, or the horror of the spectator. The general rules which determine what actions are, and what are not, the objects of each of those sentiments, can be formed no other way than by observing what actions actually and in fact excite them. The regard to those general rules of conduct, is what is properly called a sense of duty, a principle of the greatest consequence in human life, and the only principle by which the bulk of mankind are capable of directing their actions. Without this sacred regard to general rules, there is no man whose conduct can be so much depended upon. It is this which constitutes the most essential difference between a man of principle and honour, and a worthless fellow. The one adheres on all occasions, steadily and resolutely to his maxims, and preserves through the whole of his life, one even tenor of conduct. The other acts variously and accidentally, as humour, inclination, or interest chances to be uppermost. On the most scrupulous observance of these rules of conduct, depends the

very existence and happiness of human society, which would crumble into nothing if mankind were not generally impressed with a reverence for them.

Among the many fortuitous events which spring up daily in the world, opportunities of inculcating a moral lesson frequently present themselves; and when the mind has habituated itself to enquiry and discrimination, it will insensibly acquire a considerable degree of acumen, which may hereafter be employed with great emolument. For as it developes it's powers of reasoning, it will direct this habit to other purposes of life, and virtue will have so strengthened it's seat in the understanding, that it's principles will be both relished and admired when at a future period, they are examined abstractedly. It is for this reason, we cannot too often, after having laid down a moral principle, proceed to explain it by a practical illustration. A very little industry will qualify any one for this undertaking. The same volubility of speech which is often *admirably* exerted to propogate the villainous reports of scandal and to tear piecemeal the domestic happiness of others, may be diverted, by this mean, to an honourable and useful end.

When a child perceives (as he will quickly) that those who advise him, rigidly practise what they advise, he will require no stronger incitement to a moral life. The constant appearance of harmony and tranquillity which result from the practice of sobriety and integrity, he will readily discover and value, and he will find therein the best arguments against vicious inclinations. Children are actuated by a spirit of imitation, they seldom consider the propriety of the action they imitate, especially if it occur under their paternal roof. For what can

be wrong, that is done by a parent? This is the natural inference of a child. Nothing is said before children without effect. One word of admiration, for instance, of a splendid equipage, or of fashionable levities, dropped from the lips of a father, will create a passion for them in the son, which will grow up with his years, and perhaps never be extinguished. The blind indolence of parents is the origin of half, perhaps of all the disorders which scourge society; and their criminal overfondness effects a moral murder of their children, and commits the happiness of mankind to the sport of chance. If a child hear nothing but the voice of truth, honesty, and right reason, pointing out to him the errors which prevail in the behaviour and conversations of mankind; and if the rules by which they are to be discerned be laid before him, there is almost a moral certainly that he will escape the dangers of intemperance and be preserved from the contagion of vice. Youth is the season of curiosity and impetuous desires. It will require therefore a skilful and masterly hand to direct the former to proper objects, and the latter to honourable attainments. Nature seems to have given us during our infancy, an inquisitive spirit and a ductile temper, for the express purpose of facilitating our acquisition of the rudiments of knowledge. We ought, however, to remember, that notwithstanding this favourable disposition, we are not at liberty to use compulsion, threats, or angry expressions, as instruments for the communication of truth. If possible, EVERY ACQUIREMENT OF A CHILD SHOULD BE MATTER OF CHOICE; for reason is the enemy of all violence and of all force, and conquers only by gentleness, persuasion, and truth. To teach the hu-

man race how to live and how to think, by menaces and terror, is to degrade, vilify, and imbrute the rational nature of man. This sort of discipline is common to tyrants of every denomination, and it must be acknowledged, that it is well calculated to depress the freeborn and independent mind, and to prepare it early for silent obedience and timid slavery. With a rod in our hands, we scourage the child into obedience, and teach him what he will forget, perhaps renounce and despise, when he is of an age to think and act for himself. [H. R. Yorke.] If we trace the origin of those virtues in man, which render him fit for the BENIGN OFFICES of life, we shall find that they all CENTRE IN SYMPATHY. For had the mind of man been totally divested of this affection, it would not in all probability have ever attained any ideas of equity. Yes, it was the movements of sympathy which first inclined man to a forbearance of his own gratifications, in respect to the feelings of his fellow creatures; and his reason approved the dictates of his inclination. A strict adherence to the principles of equity, may be said to include the perfection of moral rectitude. This being granted, all human virtue will be found to proceed from equity; consequently, if the principle of equity itself owes it's source in the human mind to the affection of sympathy, thence all human virtue must derive it's source. When this benign affection holds a superiority in the mind to other affections, inclination will lead to the performance of the duties of humanity. But in those insensible minds where this affection is originally weak, or where it is extinguished by the excess of hostile passions, equity, unsupported by benevolence, has either no place in the

mind, or through the cold precept of tuition, bears a feeble sway. It is known that the power of custom over the mind arises from such a repetition of the same impression, as act to the weakening or destroying the force of every impression of a contrary tendency. Could we therefore, by the spirit of our laws, exclude from society the operation of every impression which partook of the smallest tincture of cruelty, and did we encourage the operation of every impression which had a benevolent tendency, it appears probable, that we should exalt the sympathies of mankind to a degree which might act more forcibly than the coercion of rigourous laws, to the restraining all acts of violence, and consequently all acts which militate against the public peace. For example, were government to act on so liberal a sentiment of benevolence, as to take under the protection of law the happiness of the BRUTE species, so far as to punish in offenders that rigourous, that barbarous treatment they meet with in the course of their useful services, would it not tend to increase sympathy? would it not highly enlarge our notions of equity, by pointing out to public observation this moral truth, that tenderness is due to those creatures, without whose daily labour society would be bereaved of many enjoyments? [Mrs. Macaulay.]

There is a beauty in CANDOUR and PLAIN DEALING, which procures good will and affection, even above many virtues which make a more splendid figure. Nature prompts to this virtue; for no person ever recurred to dissimulation, but to hide some wrong. Candour is indeed a great sweetener, for without it there can be no friendship or mutual confidence. Marechal de Turenne, when he command-

ed in Germany, was offered a considerable sum, by a neutral city, to march another way. "I cannot accept it," said the Marechal, "because it was not my intention to pass through your city." This single stroke of character, was sufficient to endear that great man, even to the enemies of his country.

As children are naturally candid, it is an easy and pleasing task to keep them so. If their confidence be gained by kind treatment, they will never think of dissembling. [Lord Kaims's Hints.] It is AMIABLE DISPOSITIONS which distinguish man from other animals, and by constituting his real merit make him also a fit instrument for promoting the happiness of society at large. It is VIRTUE which gives him a relish for true and solid glory, inspires him with the love of his country, and inclination to serve it faithfully; which teaches him to prefer the public good to his private interest, to think nothing so necessary as his duty, nothing truly valuable besides integrity and equity, nothing comfortable but the testimony of his own conscience, and the approbation of wise and good men, or any thing disgraceful but vice. It is virtue which makes him disinterested, and secures his liberty; which raises him above flattery, reproach, menaces, and misfortunes; which prevents his giving way to injustice, however mighty and formidable it may be; and which habituates him, in all his proceedings to have a view to the lasting and incorruptible judgment of posterity; and never to prefer before it the faint glitter of a false glory, which will vanish like smoke at the end of his days. These, then, are the ends which good masters propose in the education of youth. They set but an inconsiderable value upon the sciences, un-

less they pave the way to virtue. They estimate the profoundest erudition at a low rate, if unattended with probity. It is the honest man whom they prefer to the learned; and by laying before their scholars the most beautiful passages of antiquity, they strive more to make them virtuous, good children, good fathers, good friends, and good citizens, than to enlarge their critical knowledge of language. [Rollin's Belles Lettres.] BEFORE ULYSSES DEPARTED, TO GO TO THE SEIGE OF TROY, HE TOOK TELEMACHUS UPON HIS KNEES, embraced him, AND UTTERED THESE WORDS. "O my son! may the gods never let me see thee again; let rather the fatal scissars cut the thread of thy early days, while yet it is scarcely formed, as the reaper cuts down with his sickle the tender flower, which has just begun to blow; let my enemies dash thee in pieces, before the eyes of thy mother and me, if ever thou be corrupted, and seduced from virtue. O my friends," continued he, "I leave my son with you, who is very dear to me. Cherish his tender years. If you love me, banish all pernicious flatterers from his presence; instruct him how to overcome his passions; and let him be treated like a tender plant, which is bent in order to make it grow upright. Above all, forget not to render him just, beneficent, sincere, and faithful in keeping a secret. Whoever is capable of a lie, is unworthy to be counted a man; and whoever knows not how to be silent, is unworthy to govern." [Telemachus, b. 3.] The following books should be read.

Dr. Percival's Father's Instructions to his Children, 12mo. 5*s.* 6*d.* bds. Johnson. Archdeacon Paley's Moral and Political Philosophy, 2 vol. 8vo. 16*s* in calf binding.

Le Grice's Analysis of Paley's Moral and Political Philosophy, 1*s.* 6*d.* Gisborne's Investigation of Mr. Paley's Moral Philosophy, 8vo, 3*s* 6*d* bds. White. Dr. Enfield's History of Philosophy, from the earliest Times to the beginning of the 18th Century. 2 vol. 4to. 21 2*s* bds.

If ethics are to be considered in the systematic method of a science, the moral philosophy of Hutcheson may be recommended as one of the clearest, the most elegant, and the concisest treatises which has appeared. The numerous writers who have fabricated fanciful and destructive systems, may be suffered to sink in the gulph of oblivion never to emerge. [Dr. Knox.]

METAPHYSICS,

or that part of philosophy which considers the nature and properties of thinking beings, has undoubtedly been most profoundly discussed by Locke in his "Essay on the Human Understanding;" an Abridgment of which has been made by Wynne, asserted, by some, to be superior to the original work. Our knowledge of metaphysics before Locke was trifling. Whether he exhausted the subject, or whether new light has been thrown upon it by Hartley, Beattie, Priestley, and others, can never be determined, unless the science itself was capable of something like demonstration. Perhaps we may consider the old writers as more learned, and the moderns more natural. We agree with Locke because we are afraid to differ from him; but we join in opinion with Beattie, because he seems to have brought down his positions and arguments to a level with our understanding. [Jackson's Four Ages.] Those who wish to search deeply into this science, which has been said to "comprehend within it's wide grasp *every thing existing*," may consult the Works of

Aristotle and Plato among the ancients, and those of Newton, Cudworth, Hartley, and Reid, among the moderns. They may also weigh in the scales of Malebranche, Des Cartes, Hume, Berkeley, Price, Porterfield, Lord Kames, Lord Monboddo, Drummond, &c. The neatest and most pleasing specimen of metaphysical composition in the English Language is, perhaps, the "Three Treatises, on Art; Music, Poetry, and Painting; Happiness;" by James Harris, esq. the author of "Hermes."

FALSEHOODS.

In our conduct to children let no moral delusions be practised; no artificial course of experience, no plots to make out the truth; no *listening* fathers, mothers, or governesses; no pretended confidants, no perfidious friends; in one word, no falsehood should be practised. Children, whose simplicity has been acted on by the fabling morality of their preceptors soon begin to suspect their arts, and the charm is for ever reversed. When once a child detects you in falsehood, you lose his confidence, and his incredulity will then be as extravagant as his former belief was gratuitous. Honesty is the best policy, in Education as well as in all the other concerns of life. We must not only be exact in speaking the truth to our pupils, but to every one else. It is not difficult to explain to young people the real meaning, or rather the nonsense, of a few complimentary phrases; their integrity will not be increased or diminished by either saying, or omitting to say, "I am much obliged to you," or, "I shall be happy to see you at dinner," &c. the common custom of the country, and of the society in which we live, must regulate the style of complimentary language, and

there are few so ignorant of the world as seriously to misunderstand this, or mistake civility for friendship. Servants must have no communication with children, if you wish to teach them the habit of speaking the truth. The education, custom, and situation of servants, are at present such, that it is morally impossible to depend on their veracity in their intercourse with children. Servants think it goodnatured to excuse and conceal the little faults of children, to give them secret indulgences, and even positively to deny facts, in order to save them from blame or punishment. Even when they are not fond of the children, their example must be dangerous, because servants do not scruple to falsify for their own advantage; if they break any thing, what a multitude of equivocations! if they neglect any thing, what a variety of excuses! what evasions in action or in words, do they continually invent! If children, before they can perceive the general advantage of integrity, and before they can understand the utility of truth, see the partial immediate *success* of falsehood, how can they avoid believing in their own experience? If they see that servants escape blame, and screen themselves from punishment, by telling falsehoods, they not only learn that falsehood preserves from pain, but they feel obliged to those who practise it for their sakes; thus it is connected with the feelings of affection and of gratitude in their hearts, as well as with a sense of pleasure and safety.

When children break or waste any thing, from pure carelessness, let them, even when they speak the truth about it, suffer the natural consequences of their carelessness; but at the same time praise their integrity, and let them distinctly feel the difference

between the slight inconvenience to which they expose themselves by speaking the truth, and the great disgrace to which falsehood would subject them. The pleasure of being esteemed and trusted is early felt, and the consciousness of deserving confidence is delightful to children; but their young fortitude and courage should never be exposed to severe temptations. It is not sufficient to excite an admiration of truth by example, by eloquent praise, or by the just rewards of esteem and affection; we must take care to form the habits at the same time that we inspire the love of this virtue. Many children admire truth, and feel all the shame of telling falsehoods, who yet, either from habit or from fear, continue to tell lies. Tho' the desire of praise be strong in childhood, yet it is not a match for any of the bodily appetites, when they are strongly excited. Those children who are restrained in the choice, or the quantity of their food, are strongly tempted to be dishonest to gratify their appetites. Young people, however, who are regularly permitted to eat and drink as much as they please, can have no temptation from hunger and thirst to deceive; if they partake of the usual family meals, and if there be no epicurean distinctions between rarities and plain food, the imagination and the pride of children will not be roused concerning eating. To break habits of falsehood in young children let us begin by removing the temptation. For instance, if the child has the habit of denying that he has seen, heard, or done things which he *has* seen, heard, and done; we must not, on any account, ever question him concerning any of these particulars, but forbear to give him any pleasure which he might hope to obtain by our faith

in his assertions. Without entering into any explanations, we should totally disregard what he says, and with looks of cool contempt turn away without listening to his falsities. When a patient, far advanced in his childhood, is yet to be cured of a propensity to deceive, the business becomes formidable. It is dangerous to set our vigilance in direct opposition to his cunning, and it is yet more dangerous to trust, and give him opportunities of fresh deceit. If the pupil's temper be timid, fear has probably been his chief inducement to dissimulation. If his temper be sanguine, hope and success, and perhaps the pleasure of inventing schemes, or of outwitting his superiors, have been his motives. In one case, we should prove to the patient, that he has nothing to fear from speaking the truth to us: in the other case we should demonstrate to him, that he has nothing to hope from telling us falsehoods. Those who are pleased with the ingenuity of cunning, should have opportunities of shewing their ingenuity in honourable employments, and the highest praise should be given to their successful abilities whenever they are thus exerted. They will compare their sensations when they are objects of esteem, and of contempt, and will be led permanently to pursue what most tends to their happiness. We should never deprive them of the hope of establishing a character for integrity; on the contrary we should explain distinctly to them, that this is in their power. Examples from real life will strike the mind of a young person just entering into the world, much more than fictitious characters or moral stories. The opinions which young people hear expressed of actions in which they have no share, and of characters with whom

they are not connected, make a strong impression on them. The horror which is shewn to falsehood, the shame which overwhelms the culprit, they have then leisure to contemplate; they see the effects of the storm at a distance; they dread to be exposed to it's violonce, and they will prepare for their own security. When any such strong impression has been made upon the mind, we should seize that moment to connect new principles with new habits of action: we should try the pupil in some new situation, from whence he may derive hope of obtaining reputation, by integrity. All reproaches on his former conduct should now be forborn, and he should be allowed to experience, in full security, the pleasures and the honours of his new character. [Miss Edgeworth.]

DECEPTION AND FRANKNESS.

There is no conduct in the education of youth more pernicious in it's consequences, than the practice of deception. It cuts off all generous reciprocity between children and persons of mature age. It generates a suspicious temper, which, instead of confiding in your demonstrations and assertions, exercises itself in perpetual watchfulness, expecting continually to detect your insincerity. I teaches our children the practice of similar arts, and, as they have been overreached by their superiors, to endeavour to overreach them in return. What can be more unjust than the conduct of those parents, who, while they pride themselves in the ingenuity with which they deceive their children, express the utmost severity and displeasure, when their children attempt a reprisal, and are detected in schemes of similar adroitness? It would be a useful task to enumerate the various sorts of de-

ception which it is the custom of ordinary education successively to impose upon it's subjects. The practice of deception is one of those vices of education which are most early introduced into the treatment of youth. If the nurse find a difficulty in persuading the child to go to sleep, she will pretend to go to sleep along with it. If the parent wish his youngest son to go to bed before his brothers, he will order the older ones up stairs, with a permission to return as soon as they can do it unobserved. If the mother be going out for a walk or a visit, she will order the child upon some pretended occasion to a distant part of the house, till she has made her escape. It is a deception too gross to be insisted on, to threaten children with pretended punishments, that you will put them into the well; that you will give them to the old man; that there is somebody coming down the chimney to take them away. If I would dissuade a man from drunkenness, gaming, or any other vice, nothing can be more incumbent on me, than to examine carefully it's temptations and consequences, and afterwards to describe them with simplicity and truth. I ought not to utter a word on the subject which is not pregnant with meaning. I should take it for granted that the person with whom I expostulate is a rational being, and that there are strong considerations and reasons which have led him to his present conduct. If I utter in perspicuous language the genuine deductions of my understanding, and results of my reflection, it is scarcely in human nature that I shall not obtain an attentive hearing. But there is a common-place language on subjects of morality, vague and undefined in it's meaning, embracing some truth, but full

of absurd prejudice, which cannot produce much effect on the hearer. It has been repeated a thousand times; it has been delivered down from age to age; and instead of being, what all morality ought to be, an impressive appeal to the strongest and most unalterable sentiments of the human heart, is the heaviest and most tedious homily that ever insulted human patience. Nothing tends more effectually to poison morality in it's source in the minds of youth, than the practice of holding one language, and lying down one set of precepts for the observation of the young, and another for the adult. You fall into this error if, for instance, you require your children to go to church and neglect going yourself; if you teach them to say their prayers as a badge of their tender years; if they find that there are certain books which they may not read, and certain conversations they may not hear. The line which is ordinarily drawn between men and children is so forcible that they seem to themselves more like birds kept in a cage, or sheep in a pen, than like beings of the same nature. They see what is at present going on respecting them; but they cannot see what it means, or in what it is intended to terminate.

Rousseau, to whom the world is so deeply indebted for the irresistible energy of his writings, and the greatness and originality of his speculations, has fallen into the common error in the point we are considering. His whole system of education is a series of tricks, a puppet-show exhibition, of which the master holds the wires, and the scholar is never to suspect in what manner they are moved. The scholar is never to imagine that his instructor is wiser than himself. They are to be companions; they

are to enter on their studies together; they are to make a similar progress; if the instructor drop a remark which facilitates their progress, it is to seem the pure effect of accident. While he is conducting a process of the most uncommon philosophic research, and is watching every change and motion of the machine, he is to appear in the utmost degree frank, simple, ignorant, and undesigning. The treatise of Rousseau on education is a work of the highest respectability. It contains a series of most important speculations on the history and structure of the human mind; and many of his hints and remarks on the direct topic of education, have been found of inestimable value. [Rousseau's System is admirable as a whole, and every rational treatise has made "Emile" it's foundation. After all the falsehoods which have been detailed of it's author, and the misrepresentations which have been played off, in the most ingenious treatises which have appeared from the Rev. D. Williams to Miss Edgeworth, he has been abused, yet copied and imitated.] But in the article here referred to, however high may be it's merit as a vehicle of fundamental truths, as a guide of practice it will be found of pernicious tendency. The deception he prescribes would be in hourly danger of discovery, and could not fail of being in a confused and indistinct manner suspected by the pupil; and in all cases of this sort a plot discovered would be of incalculable mischief, while a plot rejected would have little tendency to harm. If we could have our children frank and sincere in their behaviour, we must take care that frankness and sincerity shall not be a source of evil to them. Punishment should find no share in a truly excellent

system of education; even angry looks and words of rebuke should be wholly excluded. Whatever plan be adopted, it cannot fail to appear in the highest degree impolitic and mischievous, that young persons should have reason given them to repent of their sincerity. There can be no one thing of higher importance in the education of youth, than the inspiring them with FRANKNESS. What sort of opinion must we form to ourselves of a young person, who regards his parent or instructor as a secret enemy or an austere censor, and who is solicitous, as much as possible, to withdraw all his actions and thoughts from his observation? What sort of education must that be, where the thing pressed by the youth upon his confidant with the most earnest importunity is, 'Do not let my father know any thing about it?' It is worthy of observation, how early some children contract a cunning eye, a look of care and reserve, and all the hollow and hypocritical tricks and gestures, by which the persons who have the care of them are to be deceived and put on a wrong scent. THE CHILD whom any reasonable person would wish to call his own or choose for the object of his attachment, is a child, whose countenance is open and erect. Upon his front sits fearless confidence and unbroken hilarity. There are no wrinkles in his visage and no untimely cares. His limbs, free and unfettered, move as his heart prompts him, and with a grace and agility infinitely more winning than those of the most skilful dancer. On the slightest encouragement, he leaps into the arms of every thing which bears a human form. He welcomes his parent, returning from a short absence, with a bounding heart. He is eager to tell the little

story of his joys and adventures. There is something in the sound of his voice, full, firm, mellow, fraught with life and sensibility; at the hearing of which my bosom rises, and my eyes are lighted up. He sympathizes with sickness and sorrow, not in a jargon purposely contrived to cajole the sufferer, but in a vein of unaffected tenderness. When he addresses me, it is not with infantine airs and in an undecided style, but in a manner which shews him fearless and collected; full of good sense, of prompt judgment, and appropriate phraseology. All his actions have a meaning; he combines the guilelessness of undesigning innocence with the manliness of maturer years. It is not necessary to contrast this character with that of a child of an opposite description, to demonstrate it's excellence. With how ill a grace do cares and policy sit upon the countenance of an infant? How mortifying a spectacle, to observe his coldness, his timidity, the falseness of his eye, and the perfidy of his wiles! It is too much, to drive the newly arrived stranger from human society, to inspire him with a solitary and self-centred spirit, and to teach him to fear an enemy before he has known a friend! [Godwin's Enquirer, essay xii.]

EXTRAVAGANCE OF DRESS.

The desire of exciting admiration by personal charms is an ambition, which in all situations of social life, will be found prevalent in the human character. The American hunter, the Eastern despot, and the European beau, are equally fond of heightening, by art and ornament, the natural graces of person; and as the standard of beauty varies, according to the different prejudices of different societies, modes of embellishment must consequently

vary. But in those societies where the laws of propriety are established, the vanity of excelling in personal charms is commonly united to the vanity of excelling in costly apparel. A vanity which has ever been found so prevalent in civilized societies, that governors themselves, instead of setting the example of a reasonable sobriety, have led the way in all the extravagancies of dress; and even where the leaders of the people have seriously endeavoured to put a stop to the growth of this luxury, they have commonly been foiled in the attempt. According to our ideas of beauty, we certainly find that the beauty of the human person is more capable of being heightened by exterior ornament, than that of the other animals. This, it may be said, must either be a defect in the natural beauty of the human form, or a defect in our judgment; but it is certain, that when the human form is totally neglected, it soon loses the appearance of beauty. Even an anxious attention on the article of personal figure, when contrasted with an utter contempt for grace and harmony, may be a foible on the right side; as slovenly habits will be found more at war with the refinement of human sentiment than foppery itself. But tho' much sophism has been used to prove that the LUXURY of dress in it's most extravagant height is advantageous to society, yet a wise government will do well to correct it's excess. The waste of time it occasions, must needs impede human improvement; and the refinements of art, in this case, tend to mislead human sentiment on the nature of that excellence which is the most respectable in a rational being. Flowing garments suit not with the offices of labour; but were a mode of dress for festivals to be

adopted, which, though graceful, required little time to adjust, it might serve to generalize taste, and consequently to refine sentiment. Were the leaders of the people by their example to restrain the idleness of fancy, and give stability to fashion, the shameful waste of time and money, which at present prevails in most European societies, would be saved. The inventive faculties, which are now pressed into the service of miliners and hair-dressers, would be better employed; and the motley show which society at present sets forth, would give place to a gravity and a dignity of appearance more conformable to the high ideas we have conceived of rational nature. [Mrs. Macaulay.]

WEALTH.

Of the various objects with which children are surrounded, those would naturally appear the most valuable which were the most useful, or that contributed in the greatest degree to their amusement. Nor is it easy to make children, who have been brought up with simplicity, comprehend why a thing of little or no use is to be valued on account of what it cost. This adventitious value, however, is learned by imitation. Children see such things esteemed by those around them, and learn to pique themselves on the possession of that which they are told is beyond the purchase of the vulgar; and thus, at a period of life when a field-flower or a mountain-daisy would appear more valuable than a diamond, to unsophisticated nature, do they learn an undue estimation for whatever distinguishes that rank which they behold the universal object of respect and deference. The pity which they are taught to bestow upon the poor, seldom inspires children with benevolence; be-

cause they are forced by early association to contemn poverty, and to consider it as a mark of inferiority, a specific distinction, in considering which all idea of a common nature is lost. Thus are the ideas of poverty and meanness, of wealth and respectability, linked together from the cradle, and become inseparable. Where there is much cultivation of mind, the association will no doubt be in some degree counteracted; but even in cultivated minds we frequently find a value given to wealth, on account of the ideas of honour with which it is associated, infinitely superior to that which would have been produced, merely by considering it as a means of procuring us certain gratifications. Were children taught by the conduct of their parents, as well as by the lessons of their preceptors, to estimate the advantages of wealth and power at *their proper value;* were the virtues of frugality, temperance, and economy, once more recalled from their long and hopeless banishment, to some degree of respect and estimation; and were that approbation and esteem, which is now bestowed on greatness, once more to become the meed of merit; have we not reason to expect that this portentous crisis would terminate in national prosperity, built, not on the quicksand of extended commerce and flourishing manufacture, not on the *blood-stained* treasures of the East or West, but on the solid rock of public and private virtue. Let every mother, who has a sufficient degree of patriotism, and of parental tenderness, to feel a glow of heart in the contemplation of such a picture, consider herself as an instrument in the hand of providence to contribute to it's realization. Let her reflect, how much the proper education of one

single family may eventually contribute towards it; and that while the fruits of her labours are a rich harvest of peace, happiness, and virtue, which may descend through generations yet unborn, she will herself enjoy a glorious and eternal reward. It is because they are hopeless of being able to stem the torrent by individual exertion, that individuals permit themselves to be carried down by the stream: for I am persuaded, that were all the joys of ambition, luxury, and dissipation, to be pursued by those alone who find pleasure in them, the number of their votaries would soon be considerably diminished. We are far more solicitous to *appear* happy than to be really so; and to this *appearance* of happiness the reality is often sacrificed. Health, peace, and competence, are essential to human felicity; yet health, peace, and competence, are despised as vulgar blessings, of which we make a willing offering at the shrine of fashion. Even the pleasures of SOCIETY, pleasures so congenial to the human heart, are now almost exploded. When the feast of hospitality is spread by friendship for the objects of esteem and affection, it never fails to produce satisfaction, complacency, and delight. By convivial cheerfulness the cares of life are suspended, while sympathy opens the heart to the impressions of benevolence. The powers of conversation are then called forth with peculiar advantage. Sentiments are developed, and obtain a value from their currency, which was unknown even to the utterer. This is society, and for what is it now exchanged? For parties, where pride and ostentation open their doors for the reception of the vain and idle; for well-dressed mobs, who meet to complain of crowd, and heat, and noise, or to

wrangle at the card-table; or, as Miss Edgeworth expresses it, "to shew their fine clothes, to weary and hate each other." And this is called *happiness!* [Miss Hamilton.]

FEAR.

Convince your servants that to preserve your children from the influence of terror is an object of importance in your mind; attentively observe the first appearance of it's effects, nor let it pass without an examination into the cause: make them sensible, from experience, that children may be prevented from touching what is hurtful by other means than telling them that "it will bite them;" and that making it a constant rule never to give them what they endeavour to obtain by tears, will be found a far more efficacious remedy than to call for the old man, or the black dog, who is to come down the chimney for naughty children. To allure or to frighten them into a compliance with our will, we equally employ a system of falsehood, and then we expect them to speak the truth! If symptoms of a contrary disposition appear at an early period, we never advert to the thousand lies they have from the cradle heard us utter, many of which were too palpable to escape the detection of even infantine sagacity; we never consider the associations *we* have thus excited, but immediately lie all the blame upon poor human nature! Having discarded from our service all imaginary instruments of vengeance, you will perhaps apprehend that your children may become unmanageable: and from their want of experience, and from the possession of that courage which has ever been repressed, may expose themselves to danger. To avoid this you perhaps have anticipated my pro-

posal of a constant watchful attendance upon all their steps; a servant always at their heels, to move where they move, and to be ever ready to explain with vociferous exclamation, that the knife will cut! the fire will burn! and the water will drown the pretty dears! If you imagine I intend to advise this, you are deceived; for all this necessary information I would have the pretty dears derive from their own experience. At the risque of very little personal inconvenience they will soon learn it more effectually, than by the silly precautions of a servant. Her exclamatory admonitions can only give a vague indeterminate idea of danger from these objects, which, from the little confidence experience has probably taught them to place in her veracity, may possibly make but a slight impression; or if it make a forcible one, that impression must be the general association of terror with the object, without a discriminating apprehension of the cause why that terror is excited. The impression received from a slight burn, or cut, will not only be more durable, but will give such distinct ideas of the nature of the object which inflicts them, as can neither injure the mind by false images of terror, nor permit it a second time to suffer from the temerity of ignorance. Children being early accustomed to paddle their hands in cold water with impunity, cannot easily be made to comprehend the nature of the danger they are told to dread in meddling with hot. The painted figure upon the china cup they have been told would bite them if they touched it; but they have ventured, and, contrary to the assertion of the nurse, have touched it without injury. Little confidence can they, therefore, place in what she advances. From the smok-

ing of the hot water alone they cannot learn it's nature. But by giving the finger such a slight dip into it as occasions some degree of pain, it becomes at once intelligible. How many shocking accidents might be thus prevented! A child who from experience knew the nature of the danger which awaited him, would not rashly overturn a tea urn, or set his little frock on fire. I once saw a gentleman (very wisely, as I thought, tho' very cruelly in the opinion of some others of the spectators) dip his son, then a boy in petticoats, into a pond in the garden, which had long been a subject of disquiet to the anxious mother; who had observed her darling's predilection for this favorite spot. In spite of her remonstrances and injunctions, no sooner did this infant Narcissus find himself at liberty, than he ran to the side of the pond, and kneeling down stretched over to view the pretty baby in the water. In this position he was found by his father; who, taking him up in his arms, and having first explained to him the nature of his danger, calmly told him that he should now judge for himself of the truth of what he said, and then very deliberately plunged him into the water; by which it is more than probable he saved the life of his child. Let a child, who has been instructed in the nature of danger from his own experience, but whose mind has never been weakened by repeated sensations of terror; and one whose infant education has been conducted on principles exactly contrary; be both for the first time presented with a new and striking object. Observe the grave and penetrating looks of the former, while he sagaciously examines the appearance of the object before him, in order to form a judgment of it's quali-

ties. After having looked at it on every side, he ventures, tho' with much caution, to submit it to his touch. Finding it every way harmless, he becomes reconciled to it, and dismisses all apprehension. While the poor infant who has been accustomed to quake at unknown phantoms presented to his imagination, associates this strong, tho' undefined idea of evil, with every new object of uncommon appearance, and without venturing on examination, gives vent to his feelings in shrieks and lamentations. Are the minds of these two children equally prepared for entering on that most material part of education which must be derived from experience? How many sources of information are open to the one, which to the other are by his fears shut up! And is it not probable that a great and decided difference will mark their characters through life? [Eliz. Hamilton.]

Children are generally afraid of being left in the dark, and this fear seems to have it's root in self-preservation. Dangers unknown cannot be guarded against: Give me but light, said Ajax, and kill me in the face of day. We ought to accustom children betimes to go about the house by themselves in the dark, and also to sleep by themselves. Where the eyes are of little service, they must make the greater use of their ears, hands, and nose; and as it is the belief of danger which causes this fear of darkness, we cannot too strongly convince their tender minds of the futility of such belief. We must not however attempt to convince them by *reasoning*, "reason is the end, not the beginning of education;" we must teach them by facts; we must habituate them from their infancy to being left alone in the dark. On the same principle we must habituate

them to the sight of masks, fire-arms, serpents, &c. It is almost unnecessary here to insist on the mischief attendant on stories of ghosts, and hobgoblins, and those vulgar fables, which, as Plato says, "are wont to fill the minds of children with folly and depravity." This instruction by facts will have, among a thousand others, this good effect, it will instil presence of mind, than which nothing can be more serviceable to man in real dangers. "Of all evils," says Xenophon, "fear chiefly confounds the mind;" and perhaps there is no passion which is so difficult to eradicate from the human mind, when once implanted. Our only remedy is to accustom our children early to the yoke of necessity, to bear the various accidents which befall them patiently; hence in future life they will learn to estimate dangers according to their real value, and preserve always their self-command. [Northmore.]

FIRMNESS OF MIND.

In danger my pupil is firm and collected. If a strange dog run at him, he turns about, and fixes his eyes upon the animal, knowing that by this means he stands a chance at least of over-awing his opponent; whereas by running away, he is certain to meet with the worst which can happen. "But what if a bull run at him; would you not then advise him to run away?" This depends on circumstances. If he be near a gate or a tree, without doubt he should avoid the enraged beast by jumping over the one, or running behind the other. If the beast should attack him in the open field, he should imitate the Spaniards in their Bull-feasts, by taking off his coat, or pulling out his handkerchief, and hold it out to engage the animals attention, and thus, while the beast

is entangled with it, secure his own retreat.

If my pupil should be IN PAIN from a fall, from a bump on his forehead, from a bleeding nose, or a cut of his fingers; instead of running to him with an air of apprehension and danger, I would remain quite still, at least for some time. The mischief is done, and there is a necessity for his bearing the pain of it; my over-solicitude would only serve to frighten him the more, and increase his sensibility. In fact, the effect of the pain is less than the fright on these occasions. I would refrain from increasing his alarm; for if he sees me run eagerly to his relief, and condole with him, he will think himself in extreme misery; but if he sees me make light of it, he will immediately be less concerned, and think himself cured as soon as the pain has abated. It is at the age when children become more than infants that they acquire their first principles of courage; and, by being inured to slight inconveniencies, learn by degrees to support greater. [Rousseau, b. 2.]

Educated by the consequences of things, my pupil sees the necessity of patiently supporting them; his free spirit is not broken by bodily pain, whether it originate from disease or accident. In LOSSES BY DEATH, my pupil has been taught to consider mourning and lamentation for the dead as idle and useless. "Why," said Pliny, "do I indulge my sorrow? a passion which if not restrained, will aggravate the slightest circumstances." This is true, and the more confined a man is in his habits, and way of life, to particular persons, or places, and even to particular animals, the more acute will his feelings be for the loss of them. It is to an erroneous education alone that we ought to attribute the puerile lamentations, and superstiti-

ous ceremonies of modern times. If my pupil lose his best friend, or dearest relative, how much so ever the blow may stun him at the moment, he speedily recovers the use of his reason; he is pacified with this reflection, that it could not be otherwise; and this is not the first time that he has to learn to bear patiently the yoke of necessity. "He loved a mortal." In OLD AGE, if my pupil live, temperance, exercise, and study, will have instructed him to bear it's evils, and like Spurinna, he will discover no appearance of age but it's wisdom. Even DEATH itself will cease to be armed with terrors, since he perceives it to be the inevitable consequence of life. It is his constant effort to act his part *well;* and he knows that a good actor, in whatever scene of the drama he makes his exit, must make it with applause. "Death," said Epictetus, "is not terrible, since it would have appeared so to Socrates; it is our opinion of it which terrifies us." To place death often before our eyes is good advice, that so we may encourage no mean or grovelling thoughts, nor be too covetous of the things of life. "Do you wonder," said Socrates, just before his death, "that it appears best to God that I should now end my life? Do you not know that up to this very hour I would not yeild to any one man the palm of having lived a better, or a more pleasant life; for I judge those men to live the best lives, who take the greatest care to become the best men; and those to live the most pleasing lives, who are most conscious of having become better men." When the same great and upright character was asked by his iniquitous accuser, why he did not make a defence? He replied, "I have been endeavouring to do so all my life." [Northmore.]

JOY.

On the same principle that my pupil indulges not in effeminate sorrow, will he disdain to exult at the misfortunes of others. Guided by reason in all his actions, he will not suffer that reason to be led astray. When Philip of Macedon died, the great Phocian permitted not the Athenians to offer up any sacrifices, saying that to indulge in such effusions of joy betrayed a little mind. Inferior minds alone exult on success. The more exalted are our own virtues and talents, the less inclined shall we be either to depress the virtues of others, or to exult at their fall. In respect to that torrent of abuse which nations at variance constantly pour upon each other, I never hear it without recollecting the saying of Memnon, the ablest, of Darius's generals, who hearing one of his soldiers uttering many imprecations and reproaches against Alexander, struck him with his spear, saying, "I maintain you, soldier, to fight, not to calumniate." [Northmore.]

CURIOSITY OF CHILDREN.

I can perceive but one certain method of preserving the innocence of children; namely, that it be cherished and respected by those who surround them. The delicacy of expression used by polite people in the presence of children, supposing a kind of knowledge which they should not have, is extremely injudicious; but in conversing with them, if you pay a proper regard to their innocence, you will naturally employ those terms which are most proper. There is a certain simplicity of expression which is suitable and pleasing to innocence, and this I take to be the best method of diverting the curiosity of children. By speaking to them plainly of every

thing, you leave them no room to suspect that there is any thing more to say. By uniting to indelicate words the disgusting ideas which they excite, you suppress in children the first fire of the imagination: you do not hinder them from pronouncing these words, and possessing these ideas, but you extinguish, unknown to themselves, the desire of recollecting them. And what a world of embarrassment do you avoid by thus expressing your ideas, without circumlocution or disguise! "How are children made?" This tho' an embarrassing question, may naturally be asked by a child, whose conduct and health, during his whole life, may possibly depend, in a great measure, on the answer. The shortest method which a mother can devise to extricate herself, without deceiving her child, is to impose silence: this might do well enough, if he had been, for some time accustomed to it, in questions about indifferent things, and that he suspected no mystery from this new command. But a mother seldom stops here. "This," says she, "is the secret of married people, little children should not be so curious." In this manner she may indeed extricate herself; but let me tell her, the child, piqued at the appearance of contempt in her reply, rests not a moment till he learns the secret of married people, and he will not long remain ignorant. Permit me to relate a very different answer which I remember to have heard given to the same question, and which struck me the more as it proceeded from a woman as modest in her discourse as in her behaviour, but who was wise enough, for the advantage of her son, and for the sake of virtue, to disregard the pleasantry of fools. It happened, a little time before, that the child had

voided a stone which tore the passage; but the pain being over was soon forgotten. "Mamma," said the boy, "how are children made?" "Child," replied the mother, without hesitation, "women make them in their water, as you did the stone, with such terrible pain that it sometimes costs them their lives." Let fools laugh, and blockheads be offended; but let the wise recollect whether they ever heard a more judicious and pertinent answer. A silly, flirting governess, in the presence of a child of four years old, will express herself in terms which the most impudent woman would be ashamed of before a boy of fifteen. She soon forgets the words she has uttered, but they have made a lasting impression on the child. Loose conversation is the harbinger of immortal actions. A vicious foot-boy will debauch the principles of a child, and the secrets of the one become security for those of the other. [Rousseau, b. iv.] Curiosity appears very early in children. They are struck with new objects, and fond of being acquainted with them. This ardour for knowledge, if properly managed, becomes the source of talents of every kind. In order to derive from this principle all the advantage of which it is capable, it will be necessary to diversify and make a judicious choice of those objects which are to be presented to the eyes of children, to excite their desire to be acquainted with their uses and properties; to gratify this desire in a reasonable manner, and suited to their conceptions, and never to return them trifling answers. If a child's curiosity be not gratified, he is discouraged, and becomes indifferent to every thing which surrounds him. Whereas if we discover to him that we are highly pleased with his ques-

tions, and his desire of being informed, he acquires a habit of examining and making enquiries respecting every object which he meets with. Curiosity, it may be said, is in danger of fixing it's attention upon frivolous, hurtful, or at least indifferent objects; but this inconvenience is providentially obviated by a propensity to what is beautiful, which directs curiosity to the most interesting objects. This natural propensity, notwithstanding it's great importance, is much neglected in modern systems of education. It is, however, the origin of the most respectable talents, and what contributes most to the acquisition of virtue. Beauty consists in order and harmony; and virtue in the harmony of human actions with the laws of nature. Every talent which is truly useful or agreeable flows from what is beautiful, and derives it's perfection from it. [De l'Education Moral.]

ANTIPATHIES.

Those who have observed the power of sympathy, and the influence of imitation, will perceive that antipathies are the offspring of unaccountable caprice. Let a child see a frog for the first time, in company with a person who has no aversion to the species, who praises the beauty of it's skin, admires it's motion, and mentions it's inoffensiveness with sympathy and tenderness; the child will be delighted with it's appearance, and attach to it no more idea of disgust than he does to that of a robin-red-breast. But alter these circumstances, and let him at the first sight of a frog hear a shriek of terror from his mamma, or some female friend; let him see her run from it with abhorrence, and hear her mention it with disgust, and it is ten to one the association thus formed

will remain fixed for life. While sitting in a friend's garden in summer, I saw a darling little girl, whose mind had been happily preserved from the dominion of prejudice, busily employed in collecting pebbles, as I imagined, and putting them into her frock, which she had gathered up and held in one hand, as a receptacle for her treasure. Observing me, she came running with a cheerful countenance: "See!" cried she, "see, what a number of beautiful creatures I have!" emptying at the same time the contents of her lap upon mine—a number of black beetles! I confess I could have excused the present: nor could I behold the harmless creatures crawling upon me without shuddering. I had, however, resolution enough to conceal my sensations, and after thanking my little friend for her kindness, begged she would replace them in her frock, that she might put them down at their own homes, so that they might find their way to their families. Delighted with the employment, in which I could not prevail on myself to assist her, she soon freed me from my disagreeable companions, and while I watched the expression of her animated countenance, I could not help reflecting on the injury I had sustained from that early association, which could still thus operate on my mind in defiance of the controul of reason. An aversion to black beetles, it is true, will not often interfere with our happiness, or with the comfort of those with whom we associate; but why, in any instance, should we injure the mind by false and fictitious prejudices? The recurrence of these painful sensations, (and what sensations more painful than those of fear and aversion) deduct much from the pleasures of life. They mislead the under-

standing and warp the judgment, and are consequently injurious to the sanity of the mind! and yet how little are they guarded against in education. Suffer me then, ye parents, to recommend it to your consideration. Watch, I beseech you the early operations of the mind; and if you observe any symptom of it's having caught by contagion any of those antipathies so falsely denominated *natural*, make it your business, by counteracting, to destroy the association which excited them. In the education of brutes we see this done every day with success; and, indeed, from the education of brutes many useful hints on the subject of association might be derived; nor where they offer, ought we to scorn to avail ourselves of them. [Miss Hamilton.]

SUPERSTITION.

Sorcery, witchcraft, omens, and dreadful apparitions, for many ages hung like a black cloud over the imaginations both of the warrior and the determined coward; and the mind, bewildered in the dark mist of error, found every thing to apprehend both in it's present and future state. As the policy of the church led her to the easier task of operating on the terrors of men, rather than on their understandings, the passion of fear, was cultivated with indefatigable attention. It was intended, that this vice, like Aaron's rod, should swallow up all the rest. Indeed the church gained too much from the misery of it's votaries, to relinquish her strong hold over the imagination. It was sufficient to answer her purposes, if she made men superstitious: there was no necessity to make them good. The errors of education on which I have been speaking, have not been carried to that excess in this country as formerly.

The good Fenelon, with Locke, and other writers of celebrity, have enlightened men's minds on this part of education; but the progress of improvement has been slow. The laziness and dissipation of parents will not suffer them to superintend the education of their own offspring, with that unrelaxing vigilance which the importance of the task requires; and I much doubt, whether those who are left to the care of vulgar attendants, are not still kept in order by being shut up in dark closets, and with threatenings of being delivered up to the power of those objects of imagination, which at one time is made the subject of their amusement, at another of their discipline. Many men, who are not remarkable for their timidity, have confessed to me, that they have never so thoroughly overcome those impressions which have been made on them in infancy, as to be equally at ease in the dark as in the light; and that they could not go through a church-yard in the dusk of the evening without recollecting the stories of the nursery. Never let your children converse with servants or the superstitious and vulgar, and you may be certain that as they grow up, the tales of ghosts, apparitions, faries, and the old man who runs away with naughty children, will only be mentioned to be laughed at. Other means will be found out to prevent them from running into mischief, than the trite caution of not doing this or that action, lest they should die and be put into the pit-hole. [Mrs. Macaulay.] Mankind were not all formed for philosophers; superstition and credulity therefore will exist. What the ignorant do not understand and cannot account for, they attribute to an unknown agency. Chimeras are the product of such

lively minds. Our future eternal destiny is also described in a manner the most wild and fanciful. Yet such delusions are frequently sources of happiness; yes, and foul befal the man who would, for a moment, shake the consolations derived from such infatuation; because "nothing which makes us virtuous and happy can be entirely an illusion." The majority of mankind are incapable of nice distinctions, of diligent investigation, of toilsome deductions. On the other hand, the learned are too fond of propagating their theories among people of inferior minds. This error in men of letters, is strikingly exemplified in the following anecdote taken from Kotzebue's "Travels to Berlin," &c. A girl romantically in love, was an excellent performer on the harpsichord: her lover also excelled on the harp. In their daily interviews, music was their favourite amusement. Unfortunately, he was seized with a disorder and died. During the first emotions of despair, the young lady sunk into a deep melancholy, and it was long ere she could collect fortitude sufficient to have recourse to her harpsichord again. At length, she touched some slight airs. The harp of her friend stood in it's wonted place. She imagined that it resounded in responses, or still accompanied her harpsichord; and this idea took such entire possession of her soul, that she became firmly persuaded that the spirit of her lover softly swept the strings, and performed in concert. Her harpsichord became the only gratifying resource which remained, because it afforded her the joyful certainty that the shade of her lover continued to hover around her. A profound natural philosopher of her acquaintance, undertook to demonstrate to her, by

a course of reasoning and experiment, that the whole was no more than what an uncontrouled fervour of imagination was capable of producing, and he succeeded in convincing her that she had strayed from the paths of sound judgment; but her consolation no longer existed; she relapsed into the deepest melancholy, and drooped, and died. O you men of erudition! why do you rob the inoffensive and simple mind of it's delightful infatuations; why sacrifice it's tranquillity, without being able to substitute your own firmness in it's stead? Why do you not reserve your systems for your own use, and forbear to obtrude your superiority on those whom you may confuse, but can neither instruct nor reclaim?

PREJUDICE.

Often, when the true nature and effects of certain causes are pointed out, prejudice forbids their reception or credit. In this case the soundest argument can be of little avail, and even the philosophy of Newton himself will be doubted. To endeavour to confute prejudice by solid reasoning is most frequently an useless and unproductive labour. The mind long accustomed to entertain erroneous opinions, cannot easily be prevailed on to relinquish them. They acquire in time the full force of truth and reason, and are frequently endeared to the heart by the relation which they bear to the disposition of of those who indulge them. Hence reason and truth are often employed in vain to remove the clouds of prejudice, which invest with an almost impenetrable obscurity, the opinions of men. Hence the slave indulges the notion, that the power and authority of his tyrant are derived immediately from heaven, and the religious zealot believes, that he maintains

the true cause of devotion, when he destroys and torments, without mercy, all those of different sentiments; nor can the simplest steps of human reason open their eyes and convince them of their error. [Dr. Cowan.]

RELIGION.

A proper respect for religion and it's teachers, we hope will never fail to be inculcated, and the general principles of Christianity ought frequently and seriously to be explained. But beware of *satiating* young people with *religion!* If I am not mistaking, Lord Bolingbroke used to attribute much of his dislike to religion to the ill-judged and importunate fanaticism of his parents; and I have known instances of the same effect. [Gregory's Essays.] Mr. Locke's observations on those dispositions, which are either to be checked or encouraged in the minds of children, are in general very excellent. He mistakes, however, in placing piety to God among the first virtues to be taught. I do not say this because I do not think piety the most useful and most sublime of all the moral dispositions; but because *it is impossible to be taught to a child.* I have attended with care to attempts of this kind by persons of great capacity and skill in education, and they have always been unsuccessful. A child will naturally ask his Mamma, who is God? To which she will answer, It is God, my dear, who made you, and me, and all the world. And where is he, mamma? He is in Heaven, my dear. And where is Heaven, mamma? the child continues. I do n't know, my dear, adds the mother. Where have you seen him? the child will interrogate. I have never seen him, says the mother, but he is every where, and gives

us every thing we enjoy. The child concludes, He is certainly very good, but wonders we cannot see him. The mother in this manner silences the child by raising it's tender affections. The heart sometimes mistakes the pleasure of goodness for the satisfaction of knowledge. This is not always the consequence of the dialogue. For those parents who have acquired a turn for speculation and religious dispute, overwhelm their children with hard and unintelligible terms of God's being a spirit, spirit being immaterial, and that all things immaterial are invisible. The being and perfections of God constitute the highest subject of human knowledge. Young people should be led to the Deity through the medium of his works, and not learn to chatter some unintelligible and useless jargon about him. It is of all subjects in the world, the most difficult on which to obtain clear ideas. If the greatest and best of men who have dignified our nature, have not been able to obtain for themselves, or to express to others any tolerable notion of, a cause existing from eternity without effect; or of an effect without a cause; or of a cause and effect co-existing: if when they have been satisfied of the being of a God, their abilities have been put to the utmost stretch to reconcile that piety which supposes him to act at pleasure, and the opinion that he acts by regular and necessary laws; that every effect has a cause, and that all the good and evil in the world is by his appointment: if this be true, as every man of knowledge must have seen that it is, what confusion and perplexity will arise on this subject in the dialogues of a nurse or a pedagogue with the children under their care! the instructor not understanding the subject, and the

scholar not having a capacity for it. Great is the wisdom, however, which is affected on these occasions, and the child is highly commended who repeats from memory the speeches he has heard; who betrays an ill-grounded apprehension of something more terrible than his master; or pretends to love something which he says, and in some cases may believe, to be greater and better than his father and mother. TRUE RELIGION is the joint refulgence of all the virtues. It resembles the sun at whose sight all the stars hide their diminished heads. It breathes benevolence and love to man. The truly pious serve God, their Creator and Benefactor, with their whole soul. They honour and love him, not so much for the sake of their promised reward, as for the benefits they have received; and are more actuated by gratitude than hope. They are severe to themselves, and compassionate to others. They endeavour to reclaim the erroneous, not by severity, but by meekness. They act always consistently with what they profess; serving God uniformly, not by fits or starts, or on certain days in the year. They are at peace with all men. They comfort the afflicted, support the distressed, and clothe the naked. They neither exult in prosperity, nor sink in adversity; but remain contented in their station, and patiently bear the afflictions with which providence visits them. Their piety is shewn, not in theory, but in practice; not in words but in works. They are not led by fear, ambition, or worldly interest, but by love to the Author of their being. They zealously endeavour to promote the welfare of all men; and labour to secure eternal bliss. The QUAKERS are, perhaps, the only body of Christians who have

uniformly maintained the principles of Christian liberty, and toleration. Every other party of men have turned persecutors whenever they had power. Papists have persecuted the protestants, the Church of England has persecuted the dissenters; and the dissenters in losing their name, lost that spirit of Christian charity, which seemed to be essential to them. But the quakers, though *established* in Pensylvania, have persecuted none. This glorious principle seems so intimately connected with the fundamental maxims of their sect, that it may be fairly presumed, the moderation they have hitherto shewn is not to be ascribed to the smallness of their party, or to their fear of reprisals. For this reason, if I were to pray for the general prevalence of any one sect of Christians (which for the general interest of Christianity is not desirable) it should be that of the quakers; because, different as my opinions are from their's, I have so much confidence in their moderation, that I believe they would let me live rationally, write my religious opinions, and publish them unmolested. And this is more than I could promise myself from any other body of Christians whatever. [Various authors, passim.] Besides the Scriptures, the most valuable works on the Christian religion are, perhaps, the following.

Moral and Sublime Pieces from the Bible, contained in No. 70 of this Work. Sacred Dramas, by Charlotte Smith. Sacred Dramas, by Mad. de Genlis. Ray's Wisdom of God in the Creation, 12mo. 3*s* bds. Crosby. Hartley's Observations on Man, 3 vol. 8vo. 1*l* 4*s*, in calf-binding. Johnson. Grotius de Veritate Christianæ Religionis. Paley's View of the Evidences of Christianity, 2 vol. 8vo. 16*s*, calf-binding. Faulder. An Analysis of Paley's View, &c. 2*s*. Robinsons. Butler's Analysis of Natural

and Revealed Religion, 8vo. 7*s* 6d. bound. Watson's Theological Tracts, 6 vol. 8vo. 2l 2*s*. bound in calf. Longman. Blair's Sermons, 5 vols. 8vo. 1*l* 11*s* bds. Cadell. Porteus's Sermons, 2 vol. 8vo. 12*s*. bds. Cadell. Horne's Discourses, 2 vol. 8vo 12*s* bds. Ogilvie's View of the principal Deistical Writers, 8vo. Bentley's Remarks on Free Thinking. A Defence of Natural and Revealed Religion, being an Abridgment of Boyle's Lectures 4 vol. 8vo. Calmet's Dictionary of the Bible, 3 vol. 4to. 31 7*s* bds. Supplement, 13*s*. bds. Taylor.

SENSUAL AFFECTIONS.

Do what we will, of all the enemies which can attack a young man, the most dangerous, and that alone from which we cannot separate him, is himself; this enemy, however, is dangerous only through our own fault, for as I have often said, it is the imagination which inflames the passions. Watch carefully, therefore, over him; he will guard himself against external danger, but it is you who must guard him against himself. If possible, constantly occupy the same bed-room; and never let him sleep with a companion. Put no confidence in instinct, when it's bounds have been exceeded. Instinct is a safe guide when it proceeds alone, but becomes suspicious when mixed with human prejudices and customs. If your pupil, like the vicious in cities, should ever be taught the means of amusing his passions, and supplying the opportunities of gratifying them, he would be utterly undone. His body and mind would from that time become enervated, carrying to the grave the deplorable effects of a most pernicious habit, the most fatal which a young man can be subject to. Till a youth arrives at the age of 20 years, his body is growing, and stands in need of all it's substance; continence during that interval is prescribed by na-

ture; if he neglects her prescriptions herein, it is at the expense of his constitution. After this term, continence becomes a moral duty; it is of use to teach us the command of ourselves and our appetites; but moral duties have their modifications, their rules, and exceptions. When human weakness renders an alternative inevitable, of the two evils we are to prefer the least, and in every case, it is better to commit a fault, than to contract a vicious habit. The real progress of nature is gradual and slow; the motion of the blood quickens; the spirits begin to ferment, and the constitution forms by slow and certain degrees. A long inquietude precedes our first desires, a long ignorance diverts them various ways, and we desire we know not what. The blood flows quickly, the pulse beats highly, and a superabundance of life seems impatient to extend it's limits. The eye acquires vivacity, and inquisitively explores all other beings; we begin to have an interest in those by whom we are surrounded; we begin to perceive that we were not made to live alone. Thus the heart begins to open to human affections, and becomes capable of attachment. The first sentiment of which a youth, carefully educated, is susceptible, is not love, but friendship. The first act of his youthful imagination, is to inform him that there are beings similar to himself, and the species affects him before the sex. Another advantage arising from prolonging his innocence is, that it enables us, by means of his growing sensibility, to sow the first seeds of humanity in his heart; an advantage of infinite importance, because it is the only time of his life when this care will be attended with equal success. It is a fact that young people, early corrupted, and ad-

dicted to debauchery, are inhuman and cruel; the heat of their constitution renders them impatient, vindictive, and impetuous. Their imagination engrossed by one particular object, rejects every other; they have neither tenderness nor pity; and would sacrifice all the world to the most trifling gratification. On the contrary, a youth educated in simplicity and innocence, is inclined to the tender passions by the first impulse of nature. When that critical age approaches, which indicates the existence of those desires which are natural to the sexes, exhibit to your pupil such scenes as may restrain rather than accelerate the growth of his passions. Be extremely circumspect in the choice of his companions, his employments, his pleasures. In proportion as he becomes more enlightened, let the ideas which you mean to excite be adapted to his understanding; and in proportion as his desires take fire, make choice of such objects as will most effectually stifle the flame. It has been told by an old military gentleman, who was as much distinguished for his morals as for his courage, that his father, who was a sensible man, seeing that he was naturally much inclined to women, spared no pains to curb this propensity; but finding, notwithstanding all his care, that his son still persisted in his vices, he carried him to a hospital established for the cure of people in the venereal disease, and, without any previous intimation of his design, led him into a gallery full of those unhappy wretches, who were severely expiating the folly which had brought them thither. At this hideous spectacle, so offensive to all his senses, the young man grew sick. "Go, thou wretched debauchee," said the father, with a significant look

and emphasis, "follow thy loose inclinations; it will not be long before thou wilt think thyself happy in being admitted into this place; or perhaps a victim to the most infamous sufferings, thou wilt compel thy father to thank God for thy death." These few words joined to the affecting scene before him, made an impression on the young man which time never effaced. Condemned by his profession to spend his youth in garrisons, he choose rather to bear the raillery of his companions than imitate their vices. 'I was a man,' said he, 'and had my foibles; but during my whole life I never could behold a public prostitute without horror.' Tutors! let me advise you to put little confidence in words; but learn to make a proper choice of time, place, and circumstances: let examples be your lectures, and rest assured of their effect. [Rousseau.]

THE SHAPE.

Delicate young ladies are very liable to become awry at many boarding schools; this is occasioned principally by their being obliged too long to preserve an erect attitude, by sitting on forms for many hours together. To prevent this the school seats should either have backs, on which they may occasionally rest themselves, or desks before them on which they may occasionally lean. This is a thing of greater consequence than may appear to those, who have not attended to it and who wish their children to acquire a very erect attitude. When the least tendency to become awry is observed, they should be advised to lie down on a bed or sofa for an hour in the middle of the day, for many months; which generally prevents the increase of this deformity by taking off for a time the pressure of the head

and neck and shoulders on the spine of the back; and, at the same time, it tends to make them grow taller. Young persons when nicely measured, are found to be half an inch higher in the morning than at night; as is well known to those who inlist very young men for soldiers. This is owing to the cartilages between the bones of the back becoming compressed by the weight of the head and shoulders on them during the day. It is the same pressure, which produces curvitures and distortions of the spine in growing children, where the bones are softer than usual and which may thus be relieved by an horizontal posture for an hour in the middle of the day, or by being frequently allowed to lean on a chair, or to play on a carpet on the ground.

Young ladies should also be directed, where two sleep in a bed, to change every night, or every week, their sides of the bed; which will prevent their tendency to sleep always on the same side; which is not only liable to produce crookedness, but also, to occasion diseases by the internal parts being so long kept in uniform contact as to grow together. For the same reason they should not be allowed to sit always on the same side of the fire or window; because they will then be inclined too frequently to bend towards one side; which in those constitutions, where the bones are too soft, is liable to produce crookedness of the spine. Another great cause of injury to the shape of young ladies is from the pressure of stays, or other tight bandages; which at the same time cause other diseases by changing the form or situation of the internal parts. If a hard part of the stays, even a knot of the thread, with which they are sewed together, be pressed upon one side more than

upon the other; the child bends from the side which is uneasy, and thus occasions a curviture of the spine. To counteract this effect, such stays as have the fewest hard parts, and especially such as can be daily or weekly turned, are preferable to others. A wise fashion of wearing no stiff stays, which adds so much to the beauty of young ladies, has commenced since the above was written; and long may it continue!

Where frequent lying down on a sofa in the day time, and swinging frequently for a small time by the head, with a loose dress, do not relieve a beginning distortion of the back, I have used with some success a swing for children to sleep in, as described in Zoonomia, vol. ii, class I, 2, 2, 16; and also a crutch chair, as there delineated; and where these do not seem to succeed, recourse may also be had to Mons. Vacher's Spinal Machine, first described in the memoirs of the academy of Surgery, in Paris, vol. iii, with a good print of it; and since made by Mr. Jones, in London, at 6, North-street, Tottenham-court Road; which suspends the head, and places the weight of it on the hips. Hence it will be easily perceived, that all other methods of confining or directing the growth of young people should be used with great skill, such as back-boards, or bandages; and that their application should not be continued too long at a time; lest worse consequences should ensue, than the deformity they are designed to remove. Of these the stocks for the feet of children, for the purpose of making them turn their toes quite out, and the frame for pressing in their knees, as they stand erect, at the same time, I suspect, when carried to excess, to be particularly injurious, and to have caused an irrecoverable lameness of the hip

joint; as expained in Zoonomia, vol. ii, class I, 2, 2, 17. These therefore should be used with proper caution, so as to give no pain or uneasy feels, or not used at all. To this it may be proper to add, that the stiff erect attitude, taught by some dancing-masters, does not contribute to the grace of person, but rather militates against it; as is well seen in one of the prints in Hogarth's analysis of beauty; and is exemplified by the easy grace of some of the ancient statues, as of the Venus de Medici, and the Antinous; and in the works of some modern artists, as in a beautiful print of Hebe feeding an eagle, painted by Hamilton, and engraved by Eginton; and many of the figures of Angelica Kauffman. And, lastly, which is so eminently seen in many of the beauties of the present day, since they have left off the constraint of whalebone stays, and assumed the graceful dress of the ancient grecian statues. In the tendency to curviture of the spine, whatever strengthens the general constitution is of service, as the use of the COLD BATH in the summer months. This, however, requires some restriction both in respect to the degree of coldness of the bath, the time of continuing in it, and the season of the year. Common springs, which are of 48 degrees of heat, are too cold for tender constitutions, whether of children or adults; and frequently do them great and irreparable injury, as I have witnessed in three or four cases. The coldness of river water in the summer months, which is about 65 degress; or that of Matlock, which is about 68; or of Buxton, which is 82, are much to be preferred: the two latter are improperly called warm baths, comparing their degree of heat with that of common springs; whereas they are in reality cold

baths, being of much lower degree of heat than that of the human body, which is 98. The time of continuing in a cold bath should be but a few minutes; certainly not so long as to occasion a trembling of the limbs from cold. In respect to the season of the year, delicate children should use cold bathings during the summer months only; as the going frequently into the cold air in winter will answer all the purposes of the cold bath. Other means of counteracting the debility of the system, or softness of bones, which occasion crookedness, consist in taking internally from 10 to 20 grains of extract of bark, with as much soda phosphorata, and mixed with from five to ten drops of tincture of opium, twice a day for three of four weeks; as is further treated of in Zoonomia, vol. ii, class I, 2, 2, 14 and 16. [Dr. Darwin.]

EDUCATION OF THE POOR.

It is a truth which cannot be too strongly impressed, that of all our exertions for the benefit of our fellow-creatures, the education of the poor is the most useful and efficacious: inasmuch as it affords a remedy for the evils of opulent and populous society; throwing into the constitution, daily and insensibly, a supply of vital strength and aliment; and potently correcting those idle and *morbid* humours, which have a tendency to decay and dissolution. It invigorates the body politic, and forms and prepares from every class of society, useful and active members, to fill the most important duties and stations of life; thereby recalling and awakening the energy and attention of the higher ranks, and stimulating them to activity and improvement. [Reports of the Society for bettering the Condition

of the Poor, 8vo. vol. iii, 32.] I am persuaded that nothing could tend so directly to dignify and improve those classes of men engaged in mechanical labour, as the knowledge of the principles of the art which they exercise. They would hence be peculiarly interested in their respective employments, and from the pleasure thence arising, their hearts and minds must be enlarged and improved. But the interest, with which they would engage in, and perform their mechanical labours, were they acquainted with the just principles of their profession, would render them much more attentive to the proper execution of those particular pieces of workmanship, in which they are occupied. Benefit must hence not only accrue to the mind of the artist, but to the society of which he is a member. It becomes, therefore, a duty incumbent on those, who direct and regulate the concerns of the community, to provide for the education of the mechanical classes of society. But this duty is scandalously neglected. [Dr. Cowan.] Among the poorer ranks of people, two or three, or ten, or twenty, neighbours, who are able to read and write, and who know the four first rules of arithmetic, may CLUB their mites, and by a well-chosen set of BOOKS found a little college in every township, and bring home the advantages of a liberal education to every cottage fire-side. In the case of a numerous club, it might be requisite to have more than one copy of such books as are most useful and necessary. Each family should have a cheap English dictionary always at hand. Those which teach the pronunciation as well as the meaning should be preferred. When men have had more frequent opportunities of social intercourse, civilization and happiness have

been augmented, and they are found to abound most where knowledge has been most diffused. Where a taste for reading prevails, the most illiterate of the multitude, who enjoy the light of knowledge only by secondary reflection, are beings far superior to the ignorant inhabitant of the waste. Yet even those are seldom aware of the advantages to be gained by book-clubs, or that thirty neighbours laying out 3*d* each, weekly, in a judicious choice of books to form a common library, might in twelvemonths put themselves and families in possession of able tutors and instructive and amusing companions. The present condition of learning in this country is a proof of the very low estimation of education among us. Is it not astonishing, that we are yet without PAROCHIAL SCHOOLS? By these our neighbours in the northern part of the island, train up their peasantry with dispositions and habits for all the duties of a dependent situation, which rarely abandon them, especially in their own country, to any gross or flagrant immoralities. Their fidelity, attention, and rigid honesty, as servants, have for this reason more than any other, perhaps, been long proverbial over the world. The lower orders of people in England present a shocking contrast to these. They are reared without instruction or any sense of duty. Their minds are vacant and their passions lawless. Any deference which they retain for decency is only preserved by interest, on the one hand, and the gallows on the other. But for these forcible checks, their untutored natures would inevitably burst forth, into all the atrocity of brutality and barbarism. [Moir.] Under this head especially, consult a publication by Lancaster, called "Improvements in Education," sold by

Darton and Harvey; which contains judicious hints relating to the education of the poor, and some excellent economic methods of teaching a great number of pupils by a single superintendent.

There are wanting among us SCHOOLS where young people might acquire necessary and useful knowledge, without learning to ape the vanities and follies of their superiors, who formerly had the privilege of enjoying them exclusively. I never knew but one school of this kind, and that sunk when it's founder and pillar was removed. A young woman of low birth and slight education but possessed of a good understanding and many useful qualifications, raised a school in a country village, on a very plain and simple plan. She took twenty pupils; which were afterwards increased to thirty. They assisted her in doing the business of the house; they made the beds, and swept the rooms in turn; after which, they sat down to needlework of the most useful kinds. They were taught to read in a plain and natural way. At washing times, they starched and ironed the linen; every one her own articles. The mistress was elegantly neat in all her habits, and in every respect properly qualified to preside over a school of this description. The school flourished for ten years, when the mistress attracted the notice of the 'squire of the parish, and her good-fortune destroyed the establishment. She married the 'squire. In her school she moved with dignity and was truly respectable, but as a gentlewoman she was awkward. The school was transferred to another, incapable of supporting it; and it sunk never more to rise. I heartily wish to see more such schools and such women to govern them. The middle stations of life are too much inclined to

educate their children too highly for their destination. Numbers of young women thus educated are turned loose on the world, without means to support themselves and disqualified to earn their living. There are indeed very few trades left for women; the men have usurped two-thirds of those which formerly belonged to them; the remainder are overstocked, and they have few resources. If women be handsome and amiable, their dangers are so much greater. Man, their natural friend and protector, becomes their betrayer, and abandons them both to shame and poverty. [Clara Reeve on Education.]

INDEX.

A

Accomplishments in general, page, 384.
Acquirements should be matters of choice, 415.
Aged, of respect for, 150.
Agriculture, Gardening, and Rural Affairs, 356.
Ale and beer, improper for children, 24, 25.
Ambition as an excitation to mental exertions, 402.
Amusement, rational means of, for children, 61.
Amusements of children, in what manner they should be conducted, 402; pernicious practice of appointing one boy a censor, 404; barbarous amusements, 405; dress, 405; of amusements which are proper for boys, and those which are proper for girls, 406; theatrical entertainments, 407.
Anatomy, 380.
Animal diet, unnatural and cruel, 27.
Animals, of torturing them, 405.
Antipathies, 445.
Application, it's power, 282.
Architecture, 359.
Arithmetic, 259.
Arts, fine, 355. mechanic, 356.
Astronomy, 313.
Attention, of fixing, 212.
Authority, 161.
Authors, contemporary, their asperities, 206; on forming independent opinions of, 214.

B

Bathing, or Washing, 8.
Bed-rooms, or Nurseries, their necessary qualities, 33; a copious portion of fresh air should be admitted into them, 33.
Beds for children should not contain more than one, 31; those of feathers pernicious, 33; of Madame de Genlis's boarded beds, 34.
Bed-steads, the height which they should be placed, 33.
Beer, improper for children, 24, 25.
Betterton's admonition to the Bishop of London on good reading, 194.
Biography, 351.
Blame, as an excitement to attention, 301.
Book-clubs, among the poor, 463.
Books for children, on the choice of, 195; Cuts or Engravings necessary, 196; Tales most attractive, 197; Purity of language, 198; Novels, 191; Fables, 199; of reciting Speeches out of Plays, 201; initiatory books of a proper kind, yet wanted, 255.

Books in general, on the choice of, 203; generally too voluminous, 203; a method of facilitating selection, 204; in what the merit of a book consists, 204; on the happiness arising from a love of books, 205.
Books recommended under the following Heads.
A series of Reading-books for Young People, 201.
Poetic Compositions, 207.
Rhetoric and Oratory, 209.
English Grammars and Criticism, 228.
Latin School Books, 239 to 246.
Greek Grammars, Lexicons, &c. 248 to 251.
French Language, 256.
Translations, 259.
Mathematics, 263.
Logic, 269.
Composition, 271.
Natural Philosophy; including Mechanics, Hydrostatics, Optics, Astronomy, Magnetism, Electricity, and Galvanism, 312.
Chemistry, 315.
Natural History, 322, 323.
Science in general, 327.
Geography, 334, 336, Topography, Travels, &c. 337.
Travelling, 338.
History and Chronology, 343 to 349.
Politics, 350.
Law, 350,
Biography, 352, 354.
Botany, 322.
Brute species should be protected by law, 417.
Business, 362.
Butter, it's nutrition, 24.

C

Candour, 417.
Caprice, in children, how cured or prevented, 13.
Carracci instanced, in favour of the power of application, 283.
Censorship of one child over others, 404.
Character, what may be deemed admirable traits of, in youth, 278.
Chemistry, 314.
Child, a description of a desirable one, 429.
Children, improper ways of carrying, 41, 42; a method recommended, 43; Swinging children injurious, 45; a fatal accident referred to, 46; improper objects offered to the minds of children, 272.
Chronology, 340.
Classes, on the method of arranging in, 254.
Classical Learning, 251; the absurdity of educating the divine and mechanic alike, 253.
Clerical Profession, 370.
Clothing, 34.
Coffee, injurious to children, 25.
Commendation, 146.
Commerce, see Business.
Company, of introducing School-boys into, 99.

Composition, 269.
Conceit in young people, in what cases to be borne with, in what reprehended, 279.
Connexions made at School, 148.
Conversation, it's advantages, 154.
Correction at school, 146.
Cottage of the labourer, 360.
Critics by Profession, 207.
Cruelty, a habit of, is generally framed at an early age, 55.
Curate in the country, in what respect his station is respectable and happy, 294.
Curiosity an excitement to produce attention, 501.
Curiosity of children, 442.

D

Dancing, 398.
Deception and Frankness, 425.
Demosthenes referred to as an instance where perseverance triumphed over the supposed want of natural powers, 283.
Dependance, 165.
Desires in children, how far to be complied with, and managed, 57.
Dictionary of the Latin Language, a disideratum, 342.
Digestive organ of children, it's treatment, 25.
Dionysius's conduct as a preceptor contrasted with the disposition of Henry iv, of France, 302.
Dispositions of children frequently ruined at an early age, 54; of exercising their benevolence, 157; amiable dispositions described, 418.
Divinity, as a study, 373.
Dramas, the superiority of those of Madame Genlis, 200; the general immorality of plays, 409.
Drawing, 391.
Dress, 405; of extravagance in, 430; it's luxury should be corrected by government, 431.
Drink, what kind is most preferable, 24.

E

Education, it's power, 2; it's end, 3, 411; what it ought to effect, 3; in what manner it was conducted by the ancients 5; the national influence of a good system, 6; it's objects how to be attained, 53; domestic and public, various considerations respecting, 140; the grand desideratum, 273.
Education, private, it's superiorities, 150; interference must be precluded, 156.
Education, public, in what case to be preferred, 49.
Elocution, 209.
Employments becoming age and sex, 365.
Employments for Persons of fortune, 367.
Emulation, 174.
English Language, 225; should be preparative to teaching other languages, 226; Dictionaries, 210; Grammars and Treatises, 228.

Engravings, their value in Children's Books, 196.
Enunciation, a method of producing it clear and distinct, 190.
Exercise, should be proportioned to age, &c. 25; the importance of exercise, 66; a propensity to activity should never be checked, 66; the habits of the ancients referred to, 66; athletic exercises necessary for boys, 67; of the exercise of the chace, 69; of frivolous amusements, 70; exercises might be rendered beneficial to the mind, 70; the best times for taking exercise, 71; young children should be kept from places of public worship, and all situations of confinement, 191.
Experience or Nature, of following, 131.

F

Fables objected to, 184, 199.
Falsehoods, 421.
Fame, it's dangers, from Plutarch, 147.
Fathers, their general inattention to the nursery censured, 56.
Fear, of it's dominion, 302; of preserving children from it's influence 435.
Fine Arts, 355.
Firmness of Mind, 149; in danger, 439; in pain, 440; in losses by death, 440; in old age, 441; in death itself, 441.
First-books for children, the preferable kind, 184, 186, 189, 190.
Food, what kind is most proper for children, 23.
Foreign Language, of learning to speak, 257.
Frankness, 429.
French Language, 226.
Friendships of private and public life, 148.
Fruit-pies, or ripe Fruit, serviceable to the constitutions of children, 25.

G

Genius, indications of, 275.
Geography, how it may be acquired in learning the Classics, 240; geographic studies, 328.
Geometry, 262.
Glossaries, the usefulness of them, 242.
Grammar, of learning it by rote, 218; the proper time for learning, 219; of the improper formation of grammars for children, 220.
Grace of action, 389.
Greatness, how prostituted, 385
Greek Language, when it may be begun to be acquired 247; it's superiority over other languages, 247; the most proper books in teaching, 248; of teaching the rudiments, 249; of teaching it through the medium of Latin, 250.

H

Habits, of the importance of fixing those which are proper, 51; the tempers of children frequently ruined at an early age, 54; trifling vanity instituted, 55; and cruelty, 55; the general neglect of fathers, 56; a summary of parental duties, 56.
Hebrew language, to whom necessary, 372.
Henry iv, of France compared with Dionysius, as a preceptor, 302.
History, 153; 339.
Honour, it's dubious import, 385.
Hunting, 405.
Hydrostatics. 312.

I

Ideas, on strengthening the act of associating, 195.
Infants, new-born, treatment of, 7.
Inclination, of ascertaining, and regulating, 57.
Informations of children against each other, 98.
Instruction, the great objects in a plan of, 306.
Intimacy between teachers and scholars, 157.

J

Joy, 442.

K

Knowledge, general 292; of exciting a desire of, 295; means of communicating, 299.

L

Labour, the habit of, necessary in every sphere of life, 71.
Language, to learn one, an easy attainment, 222; the method, 223.
Languages which are dead or foreign, difficulty of teaching them to children, 196; of the age when a child may be taught an additional language 221; a method of teaching proposed, 223; on the application of a child to a dead language before he knows his own, 219; 226; of making the study of language agreeable and pleasant, 220; requisites in learning a language, 221; disadvantages of being acquainted with one language only, 230; of learning to speak a foreign language, 257.
Latin language, it's excellence, 229; a method of learning, 235; books recommended for teaching Latin, 237; pupils ought to read prose before poetry, 241; of writing Latin exercises, 243; of Latin verses, or themes, 243; a list of valuable Latin initiatory books, 246; the reason why boys make so wretched a proficiency in this language, 290.
Law, 350.
Learning, classical, should be

subservient to other objects, 151; advantages resulting from it, 232; 251; it's utility, 233; the time when such attainments should be made, 233; some absurdities in teaching, 252; the best motive to learn, 299.
Lessons, what is necessary in the first, 305.
Letters, what kinds should be expunged from books for children, 183.
Letter-writers, who have been most eminent, enumerated, 252.
Letter-writing, as connected with biography, 351.
Library, the enjoyment which one affords, 210.
Literature, an early taste for, may be excited in children by conversation, 289.
Logic, 267.

M

Mathematics, 259; the time for studying, 260.
Mechanics, 312.
Medical Science, 374.
Metaphysics, 420.
Memory, of the Improvement of, 285; rules for strengthening, 190; instances of in Dr. Franklin, Scaliger, Magliabechi, and Buxton, 291.
Microscope, 312.
Military Profession, 382.
Milk appears designed by nature for young animals, 23; in what manner it might be made to agree with all stomachs, 23; a vegetable substances, 29.
Mind, the danger, attending it's premature culture, 26; happiness resulting from it's cultivation, 65; of it's discipline, 332.
Mineralogy, 323.
Mothers, the early part of education their province, 6.
Morality, of offences against, 280.
Morals, 410; inefficacy of mere precept, 411; on what the rules of morality are formed, 412; the benign offices of life generate in sympathy, 416; candour and plain dealing, 417.
Music, 394.

N

Natural Education, the offices which it requires, 1.
Natural History, 317.
Natural Philosophy, 311.
Nature, of following, 131.
Notions and Prejudices, the difficulty of subduing them, even tho' absurd and pernicious, 26, 450.
Novels, 198.
Nurses, abominable practices of, 36; the kind to be selected, 46; should be frequently visited, 47; nonsense of nurses, 47.

O

Old people, of their propensity to censure the young, 280.
Old women, on the absurdity

of their dressing fantastically, 28.
Oratory, see Rhetoric.
Optics, 312.

P

Parental affection, 82.
Parents, on their conduct to preceptors, 113.
Pastor, description of a true one, 370.
Pedantry, in what it consists, 326.
Perseverance in studies urged, 153.
Perspective, 394.
Philosophy, natural, 311.
Plain-dealing, 417.
Plays, the superiority of those written by Madame de Genlis, 200; of reciting speeches out of, 201.
Playthings, see Toys.
Pleasing in conversation, 400.
Plutarch's excellence, as a biographer, 253.
Pneumatics, 312.
Poetic compositions, 207.
Politics, 349.
Politeness, 398.
Poor, on their education, 462; boarding schools for them, 465.
Portuguese, the habits of their children, as to learning to read, 286.
Praise, as an excitement to procure attention, 301.
Preceptress of a village, a respectable character, 82.
Preceptor, his duty, 83; his qualities, 89; of method in teaching, 94; respecting the quarrels of children, 98; of marking out a district for play-hours, 98; school vacations, 99; leading objects and qualities of a tutor, 100; the situations of mankind prevent the best mode of education from being adopted, 107; an account of the literary exertions of the Countess de Genlis for her pupils, 109.
Prejudice, 450.
Premature Induction, it's pernicious effects, 73; it's inhumanity, 74; what nature requires, 76; the superior success of initiation at a more advanced age, 77; yet habits of application should be acquired early, in studies adapted to the pupil's age, 78; with respect to manners, 79; opinions on this subject by Quintilian, 80; Mr. Gregory, 81.
Prints, of the Defects of those intended for children, 62.
Profession, on the choice of one, 363; clerical, 370.
Public worship, of taking young children to such places, 191.
Puffing, on the modern art of, 205.
Punishments, 166, 178.
Pupil, Rousseau's interesting picture of one, 134.
Pupils, of varying incitements to their different characters, 303.

Q

Quakers, the mildness of their conduct, 453.
Quarrels of children, of the difficulty of deciding them, 98.

R

Reading Lessons, of what kind they should consist at first, 186.
Reading, on the Art of, 182; of teaching the letters as play or amusement, 185; of first books, 184, 195; the holy scriptures improperly used, 186; of improper books, 188; a method of teaching a clear and distinct enunciation, 190; what are particularly to be avoided in teaching the art of reading, 192; the art of reading important, 192; definition of a good reader, 193; by whom only reading can be taught, 194; Betterton's admonition, 194; children should be examined whether they understand what they read, 197; on a taste for reading, 210; of mechanic assistances in reading, 213.
Reasoning faculty, 272.
Reformation, public, in what manner it can only be attempted, 53.
Refractory children, how to govern, 179.
Religion, 451; true religion described, 453.
Repetition, it's utility, 299.
Rewards, 171, 180.
Rhetoric, 209.
Rich (the), their occupations, 358.
Rocking, 35, 41, 44.

S

Salt and Spice, unwholesome, 24.
School-boys, of limiting them to a district, 98; of introducing them into company, 99; of their sports and pastimes, 99.
Schools, parochial, highly necessary, 464; also schools for girls, 465.
Science, in general, 324.
Scotland, the love of learning prevalent there, 157.
Sensual affections, 455.
Servants, impropriety of children passing time with them, 48; neatness in servants necessary, 48; various considerations respecting, 49; effects resulting from keeping trains of unnecessary servants, 50.
Shape of the body, 458.
Shooting, as an amusement, 405.
Short-hand, 216.
Slave-Trade adverted to, 164.
Sleep, 30; should be proportioned to the age of children, 31; of awakening children, 32; of playing with children when asleep, 32; a regulation with respect to sleep, 33.
Sounds, the attention which children pay to them, 181.
Speaking well, 408.
Speech, 181.

Spelling, a method proposed, 184.
Spelling-lessons, in what respect objectionable, 183.
Sports and pastimes of schoolboys, 99.
Stories, in what respect objectionable, 183.
Student, advice to one, 308.
Studies of children, the importance of frequently examining them, 95.
Studies of great schools, 150.
Study, the best time for, 213; on a course of studies, 252; the power of study, 292; effects of a studious life, 293.
Suffering, an evil to which man is born, by improper treatment it communicates improper dispositions in children, 12.
Sunday Schools, of objections which have been made to them, 159.
Superstition, 447.
Sugar, it's valuable qualities, 27.
Swinging children, 45.
Syllables, of dividing, 185.
Sympathy, a powerful agent in the government of children, 84; 301: renders man fit for the benign offices of life, 416.

T

Tameness in youth an augury of want of genius, 280.
Tasks, 160.
Taste, 386.
Teachers, a Plan for supporting them by the families of a district, 158.
Tea, pernicious, 25.
Teeth-cutting, 10.
Teeth, the reasons of their early decay, 28.
Teaching, of the two methods, 305.
Tales, their attractive power in inducing children to read, 197.
Telescope, 312.
Temperance in eating and drinking, 214.
Tempers of children frequently ruined at an early age, 54.
Theatric Entertainments, 407.
Themes and Verses improper as school-exercises, 152, 253, 274.
Theology, as a profession, 373.
Thornton (Bonnel) anecdote of, 377.
Topography, 335.
Toys or Playthings, the kinds most proper, 59.
Trade or Profession, on the choice of, 363.
Translations, 229; 242; 250; 251; 258.
Travelling, 338.
Trigonometry, 263.
Tuition, on the labour of, 113.
Turenne (Marshall) an anecdote of him, 354.

U

Ulysses's charge on resigning Telemachus to the care of tutors, 419.
Understanding, qualities necessary to any considerable improvement, 332.

V

Vacations at Schools, 151, 183.

Vanity, early instituted, 55.
Vegetable diet most proper for nurses, 29.
Verses or themes, of composing, 243.
Virtue, it's importance, 418.

W.

Walking, 12.
Washing or bathing, 8.
Wealth, 432.
Wet-nursing, 96; artifices of some ladies respecting, 43.
Wheat-flour, it's strength of nutriment, 24.
Will, the pernicious consequences of it's habitual gratification, 20.
Wine, injurious to the stomachs of children, 24; in what manner it may be allowed, 24.
Women, newly married, their contrivances, 37.
Worship, public, of taking young children to, 191.
Writing, on the art of, 215.

C. Nicholson, Poughnill.

ON EDUCATION.

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by

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DE GENLIS, | &c.

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ON EDUCATION.

BY MR. PRATT.

I see too plainly custom forms us all:
our thoughts, our morals, our most fix'd belief,
are consequences of our place of birth:
born beyond Ganges, I had been a *Pagan;*
in France, a *Christian*; I am here a *Saracen.*
'T is but instruction all! Our parent's hand
writes on our hearts the first faint characters,
which time retracing deepens into strength
which nothing can efface but death or heaven.—*Zara.*

Just as the twig is bent the tree's inclin'd.—*Pope.*

Let us imagine, as an elucidation of the above assertions, a child born under every favourable event of temporal prosperity; the father rich, and the mother beautiful; it's cradle is soft and downy, it's pap is made of the whitest bread; and every accommodation that the little stranger demands, is furnished with the most pompous parade, and in the highest perfection. It will not be long before these *softnesses* will have so great an influence on the body, that the infant must imbibe from these blessings an idea of luxury. This idea will be constantly recurring, and every day's illustration of the points which first produced it, will expand on the imagination, which, like the passions and appetites, is no foe to delicacies. Voluptuous images, thus associated, are easily admitted into the young heart, and every thing which does not correspond with those images, will in proportion, be rejected. Accustomed to light and spacious apartments, he would not venture into

a dark passage without his nurse or governante. Suppose, on the other hand, a child, the offspring of laborious and indigent parents; it's birth is effected upon the straw, or upon sacking, without curtains; the wind blows hard through the casement; the mother lies down contented with her small-beer caudle, and on the third or fourth day she is up, and dandling the babe upon her knee, or dancing it in her arms. The mother of the other, meanwhile, is gradually recovering from the pains of labour, upon a couch of down; stops up every crevice of air, "lest the breeze of heaven should visit her too roughly." Dares not rise till she is sufficiently *weakened* by the forms of a fashionable lying-in, as it is, in this case, emphatically called; and, at last, after much effort and more ceremony, she ventures abroad, on some auspicious, sun-shiny day, under the fortification of cloaks, hoods, and handkerchiefs, just to *take an airing*, with the glasses of her carriage drawn up, and then returns to her chamber, shivering at those gales which fan the face of the poor woman, who inhales them as the most natural restoratives of health and beauty. About the time that the rich child begins to know the delicacy of it's condition, the poor one would find itself promising and hardy, and in some degree inured to the storms of life. Let them be at this period each five years old; the one has acquired a sensation of softness, the other a habit of hardiness. Suppose then, about this time, it were possible for them to *change* situations. The pennyless lad shall go into the warm villa, the rich stripling into the cold cottage; what would be the consequence? Exactly the same as if the two *mothers* and *fathers* were to exchange. All would be dis-

tress, dilemma, confusion, and awkwardness: the pampered youth would croud over the wretched bit of a blaze, made by two sticks laid across a brick; and the lad who was bred in a tempest, and seasoned to wind and weather, would very probably toss his plaything against the fine sash-window to let in the air, and prevent suffocation. Thus far I have spoken respecting the influence of early habits on the *body*. Let us now see what effect they have on the *mind*. The connexion between our mortal and immortal part, is far closer than betwixt man and wife. Nothing can befal the one which is indifferent to the other: sympathy implanted by nature is powerfully reciprocated; and the tie is at once tender and forcible. Consequently, the minds of those two boys, must be affected very sensibly by their respective *educations* and *customs*. As they grow up, those customs will so strengthen, that nothing but "death or heaven" can reconcile them to an innovation, either in thought, word, or deed. The *poor* boy having heard nothing but unpolished language, ate nothing but coarse food, and passed his day among clowns and cattle, will continue in the track, and if, by any unlucky stroke of chance, he be called to new pursuits, his misery must be dated from the day in which he deserted the spade, the ploughshare, or the flail. The *rich* boy, in the mean time, rises into man, amid the clash of carriages, the comfort of couches, and the luxuries of laziness. His ears are accustomed to music, fashion, and flattery; his eyes are daily charmed with objects of dissipation or delight. No possible accident could be more fatal to his peace, than a sudden deprivation of these pleasures. Take him again into the hut, he finds himself

like a fish upon land, out of his element: the greatest transports of the peasant, are to him agony; and every thing around, and within him, is as strange as if he had stepped into a new world. Why is all this? Merely because they have been *taught* to think, and feel, and act differently. We will proceed, gentle reader, if you please, to further familiar illustrations. Imagine that when these children were five weeks old, the mother of the poorest, reduced to extreme necessity, puts her infant into a basket, and lays it at the door of a person equally celebrated for wealth and benevolence, the gentleman takes it into his house, clothes, feeds, and educates it as his own. That very infant, which with the *parent* would be the lout I have described, would, with it's *protector*, be as different a creature as could exist. His pains, passions, pleasures, and ideas, totally *reversed*. Imagine, likewise, that some gipsy steals, or kidnaps, as it is called, the *rich* child from the cradle, and strolls with it up and down the country: it will have it's education in the open air, it's lodging in a barn, and it's dirty diet under a hedge. Probably it will imbibe the craft and subtlety of the gipsy, and limit it's utmost ambition to trick the traveller out of sixpence, cross the palm with silver, and tell the events which *have* happened, or are still to be brought forward, by the *line of life*. Thus in every other instance (with a few peculiar exceptions, which have nothing to do with general rules), *habit* and *education* form the mind, and colour the human character. There are, doubtless, some constitutions so adapted by nature to virtue, that no troubles, situations, nor temptations, can subdue or extirpate their amiable propensities, but ninety-nine times out of a hundred,

a character takes it's bias and bearing from mere tuition and the line it is either led or thrown into in the first stage of the human journey. If there be *no* innate ideas, it follows that the mind of every new-born babe is equally pure. If there *be* those infantine seeds of the understanding and little embrios of intellect, they are easily turned into what channel the parent thinks proper, so that I cannot but think the father of a family one of the most awful charges upon earth. It is admitted, that many children are unlike their parents both good and bad; yet you will observe, where the notions of parents and children are dissimilar, the dissimilitude arises rather from difference of ages, or improper culture, than any thing else; in general, children are not liker in features than habits, and family-*minds* are as often transmitted as family-*faces*. There is a tractability in youth which receives, like snow, every impression, and it is almost as difficult to erase the impression of one as the other. If a son be trained up early to decency of manners, and have the example of dignity living and moving before his eyes (unless his temper be particularly untoward) he will turn out an elegant character. If he be trained up in different principles, he will act accordingly. The hoyden and the prude, among the other sex, take not their tint of character one time in ten from nature, but from an early neglect of giving them a proper idea of deportment. It may be opposed, that very sedate women have romping, runaway daughters, and very prudent fathers have very perverse sons. I mean to say no more than this, that *generally* men and women act and think as they are taught while they are only able to lisp out their meaning; that education will

have some influence on the most abandoned; and that, on the whole, virtue and vice depend very essentially on our primary sentiments and examples; which, whether good or ill, will eternally attend us, in some measure, through all possible transitions, from the time we leave our cradles, to the time we shall be deposited in our coffins. Habit operates with equal energy on man and beast. Evidences of the fact appear continually. Cast your eyes on that horse now engaged in dutiful drudgery, and on the herds and flocks which are grazing or sporting in the adjoining pasture: but we will confine ourselves to our own species, which are certainly the most interesting objects of speculation. I was about to observe, that custom has much to do with our characters. There are certain actions so naturally and palpably good or evil, that neither sophistry nor slander, nor address, can either injure, mend, or mar them. To question the light at noon day, or the dark in the zenith of the night, would argue a malady beyond madness: so, in like manner, to dispute, whether downright wickedness *be* wickedness, and evident excellence *be* excellence, would be a lunacy in ethics, so absurd, that the poetical frenzy of poor Lee would be cool argument to it; on the other hand, if you live and mix long with mankind, you will find many of your fellow-creatures, pining away existence under the lashes, the bleeding lashes, of reproach, merely because it is the custom to call one thing right and another wrong, without tracing either to the bottom. It is a maxim that the Vox Populi, is the Vox Dei, that "what every body says must be true." I know nothing so deserving refutation as a collection of those old saws and proverbs, which,

acquiring force from antiquity, and estimation from rust, (for there are virtuosos in letters, as well as in coins) are at length considered as utterly incontestible. Now, certain I am, that on an examination into those very maxims we put so much credit in, some will turn out futile, some disputable, and many unfaithful. This is not a place for minute scrutinies, it will be sufficient to look into *that* which I have just mentioned, and there is none more implicity believed. "What every body says must be true." I have seen many instances to disprove this; I will recur to one only which is uppermost in my memory. A young gentleman of my particular acquaintance, has for some time been deserted by his old companions, and branded as a man of unsteady principles, whose heart I know to abound with all those sensibilities which hurried him into the vortex of liberality, till he has become an object of liberality himself. He has those glowing feelings and sentiments which do at once honour and service to human nature; notwithstanding which, embarrassments have beset him, and the world puts him down as an *undone* man. The world gets hold of a prejudice, and then it is called Vox Dei. The Vox Populi, is given as the sentiment of *every body*, and thus many reputations are mistaken and misrepresented, which deserve a better fate. There are various persons likewise particularly reprobated for a few indelicate concessions to which necessity may, in violence of their better judgments, have constrained them to yield, who, had they possessed happier circumstances, would have made a much more respectable figure than those who now mark them with infamy. There is *one* cruelty in the Vox Populi, which is certainly against every

notion of the Vox Dei. 'T is the custom of abandoning the weakest part of our species to *that* ruin which the artifices of our sex have perpetrated! nor can any future repentance remove the sense of their error, or restore them to the bosoms of more fortunate women:

"They set like stars to rise no more."

I had a wife, with whom I mourned many years. She died of a broken heart. We were robbed of an only child, by a man whom we held near our hearts. It was my incessant business for five years to recover our darling, but in vain! My wife fell into a deep and rapid consumption; she grew weaker every hour. We received, by a special messenger, a packet, from our beloved, misguided, repenting wanderer! She had thrown the pathetic parts of her story into poetry.* We received, at the same time, an attested account that our child was under the protection of that institution which offers an asylum to insulted penitence. My wife had only power to press the paper, trembling, to her bosom. She feebly lifted her eyes to heaven, and died!

"Liberal Opinions."

* See "The Distresses of a Daughter," in the 59th No., or Elegiac Pieces, of this Miscellany.

ON GYMNASTICS.

BY THE COMTESSE DE GENLIS.

Without recurring to antiquity for instances of that bodily strength which would in the present day appear miraculous, a view of the armour of our ancient French knights is sufficient to shew how greatly the human species is, in this respect, degenerated. Where is the man now to be found who could walk a mile clad in a suit of such armour, without sinking under it's enormous weight? Yet every Knight wore it for months together; and travelled, ran, and fought under the load. Since the execrable invention of gunpowder, an artificial and succedaneous strength has rendered personal vigour nearly unnecessary in war: but in common life the exercise and perfect developement of man's physical powers are still equally necessary. The object of gymnastics, considered as a part of education, is to strengthen the constitution establish the health, enable us to undergo fatigue, give agility, address, suppleness, force, and that confidence which confirms courage, and makes us perform extraordinary actions without danger; in fine, to fortify us against all the accidents of life, and determine the growth of the body to the last degree of extension that nature can give it. For it is not to be supposed that a young man, brought up effeminately, will acquire that shape and size which a good education would have procured him. Effeminacy and corruption of manners in early youth oppose nature's efforts and intentions, stop her slow but wise progress, and produce rickety and dwarfish beings, those

weak effeminate creatures, full grown at sixteen and decrepit at forty-five. For some years I was entrusted with the care of a child (my nephew), to whom I paid as much attention as my duty to my pupils would permit. My care was particularly turned towards his health, which was in a deplorable state: we were apprehensive for his lungs, and that he would be deformed; and he was besides little, weak, and thin to an extreme degree. I gradually, and with proper care, made him pursue the exercises performed by my pupils: like them I made him sleep upon wood, a custom excellent on a thousand accounts, particularly as to the shape and the lungs, as it prevents catching cold, which is generally occasioned by perspiration at night, excited by the heat of matresses, and checked on getting out of bed (particularly in winter) by the cold morning air. Six months ago I returned this child to his father, and I do not think there can be found a finer, stronger, or more active young man, of the age of fifteen, better and more regularly formed, or of a more robust constitution. The following are the means I adopted with respect to this part of education.

SHOES WITH LEADEN SOLES,

which my pupils wore from the time they were put under my care to their quitting me. These soles were at first very thin, and their thickness was insensibly increased. When M. de Chartres left me, each of his shoes weighed a pound and a half, consequently the two weighed three pounds, and with this weight he ran, leaped, and walked, three or four leagues at a round pace, without being in the least fatigued. The shoes of Mademoiselle d' Orleans weigh at present two pounds; she never wears any others, except

when she dances; she walks and runs with them without any appearance of being thus loaded; in the mean time her constitution is naturally very delicate, and she is not yet fourteen years of age. Besides the strength and swiftness which the habit of wearing such heavy soles must necessarily give, it has two other advantages attending it; that of guarding the feet from all dampness, and promoting the growth by gently stretching the muscles of the legs.

THE EXERCISE OF DUMB BELLS,

which I directed to be performed before breakfast, and which continued only for ten or twelve minutes. It is an ancient exercise which Galen prescribed to his convalescents: a full account of it may be seen in the *Encyclopedie*, from whence I took it, under the word *halteres*. After this exercise the children carried, for an equal portion of time, pitchers full of water. In the country they crossed a considerable space of the garden, filled their pitchers at a natural fountain, and carrying it into their chamber filled the decanters for dinner. As this exercise had an useful object, they performed it in the country with pleasure; but at Paris, where we had no natural spring, they carried pitchers full of sand from one apartment to another, and as it was then merely a lesson, it was repeated without desire or alacrity. These exercises therefore should have an appearance of utility, which is very easy in the country, but very difficult at Paris. The size of the pitchers is to be increased as the children grow older: they should be round, with a small opening, and the handle, instead of being on the side, should cross the mouth. The two exercises just mentioned, were performed on rising in the morning and before breakfast.

THE EXERCISE OF THE PULLEY.

M. Tronchin originally invented this, and formerly practised it with success in amending the shape of deformed children. He related the circumstance to me thirteen years ago, and I immediately applied the idea to education. This pulley, fixed to the wainscot, resembles exactly that of a well, but instead of a bucket a leathern bag filled with sand is fastened to the rope. Round the pulley I directed a close balustrade to be placed to prevent any accident from the fall of the weight. In performing this exercise the child must stand perfectly upright, his feet close together, never rising upon his toes when he pulls the rope, and not letting it slide through his hands in lowering the weight. In the country it was performed at real wells placed in the children's little gardens. The wells were constructed of large casks, over which the pulley was fixed, and from these they drew water; and as the size of the buckets could not be increased, because it was necessary to proportion them to that of the well, I contrived buckets with a double bottom into which weights might be put at pleasure.

THE EXERCISE OF THE DOSSER.*

This I had ordered so as to interrupt the drawing lesson for a quarter of an hour. In the midst of the lesson the children rose, took upon their shoulders dossers proportioned to their size, and loaded according to their strength, and with these they went down and up several pairs of stairs. When M. de Chartres set off for Vendome, he could carry in his dosser two hundred and twenty-five pounds, which no person belonging to the house could do with forty pounds less.

* A sort of basket to be carried upon the shoulders.

THE EXERCISE OF THE ROPE.

This is a large rope fastened to a staple in the ceiling, in the middle of the room. The exercise, which is fit only for boys, consists in ascending to the ceiling by means o this cord ; this is very difficult without the assistance of the legs, that is, by keeping them asunder, instead of twining them round the rope, because all the weight of the body rests entirely on the wrists. Difficult, however, as it is, M. de Chartres, his brothers, and my nephew, performed the exercise equally well in this manner. This capability of ascending and desending readily by the help of a single rope, may be of great use on a thousand occasions in life. In case of a fire, if the flames should render it impossible to escape by the doors; in travelling, if we wish to descend into those deep and curious grottos, which many travellers, for want of this practice, have not been able to see, or at least have incurred great danger. This exercise, as well as that of the pulley, I employed as a relaxation between their studies; and in the winter, at Belle Chasse, between each language-lesson, and after our reading, my pupils exercised themselves in one of these two ways, or in a *trial of strength of wrists* (lutte des poignets) for ten or twelve minutes.

THE EXERCISE OF WEIGHTS AT THE FEET.

This was an invention of M. de Montpensier and my nephew, who practised it every day for six months. This exercise astonishingly increased their growth. The pupil fixes to each foot a weight as heavy as he can carry, without great exertion; he then raises himself by his hands on the rope fixed to the ceiling, till his feet are at some distance from the ground, and for some minutes contracts and extends his legs al-

ternately with considerable force. The weights which M. de Montpensier fastened to his feet last winter amounted together to fifty pounds, consequently weighed twenty-five pounds each.

LEAPING.

There are three modes of leaping; first, horizontally; secondly, over something raised above the ground; thirdly, from a high place to the ground. The last is dangerous, as in this kind of leaping there is a risk of breaking the leg, if it deviate ever so little from the proper direction in falling. This exercise, therefore, should be proscribed; especially as a perfect master in the other two modes will leap well in this, if ever he should be under the necessity of risking it, to avoid a great danger. In the garden of the country-house, where we spent our summers, I caused a piece of ground about twenty feet square to be dug up. This piece of ground which was called *the leaping ground* (sautoir), was situated under the windows of my chamber, and on a large green where the exercises of running were performed, so that without quitting my chamber I could see the children run, leap, and play at prison-bars. As the earth in this leaping-ground was soft they could receive no injury by falling. They thus leaped at full speed, that is to say, taking a distance to run: this distance should neither be too short nor too long; twelve or fifteen paces are sufficient. In leaping, the feet should not be separated from each other, and the legs should be thrown forward, so that if the child fall, his position might be that of sitting upon the ground: if he fall upon his knees it is a proof that the leap was not well performed. For the high leap I placed two forked sticks upon the border of the leaping-ground, and between

them suspended a cord. The object is to leap over this cord, which may be done in two ways, either by taking a run, or with the feet close, that is, without a run. The cord is only to be hung upon the sticks and not fastened to them, in order that it may give way, if the child should not clear it; for, if his feet were to be caught in it, the resistance would make him fall in a dangerous way upon his back, and out of the leaping-ground. When the pupil is perfectly master of this mode, he may venture to leap over real bars, taking care that their height be less than he is accustomed to clear with ease; for instance, if he commonly leap four feet with the loose cord, the bar should be no more than three feet, and we may be sure that if any imminent danger should require his leaping over a bar, or any similar obstacle, he would then rise as high as if it were only a cord. At this kind of exercise M. de Charters did not excel the rest of my pupils; but in the horizontal mode, he could clear, at a running jump, a space of twenty-one lengths of his own foot.

RUNNING.

This exercise I divided into two kinds; one a trial of speed, the other of long-windedness. In the latter the pupil does not exert all his force, and by habit a child may run a long time. Mademoiselle d' Orleans, at twelve years, ran a league without stopping or walking a single instant. No one is ignorant, that in walking the body should be erect, the toes turned out, and the leg advanced before the body at each step; for it is impossible to walk well if we advance the body and the leg at the same time. In running, it is quite the reverse; the body must be inclined forwards, the toes turned neither in nor out, and the body advance with the legs.

WALKING, RUNNING, AND LEAPING UPON THE TIGHT ROPE.

I employed a rope-dancer a whole winter to teach my pupils this exercise. They took their lessons when they rose from table, as it is not at all fatiguing, and requires no exertion. This exercise gives agility and boldness: it teaches a person to walk with address and safety in the narrowest and steepest path, which in travelling, and on many other accasions, is of no small utility.

RIDING.

Of this M. d' Orleans gave his children the first lesson, and has since presided at almost all they have taken. They all mount upon horseback with courage and skill, leap bars, ditches, &c. M. de Chartres, tho' he does all these things, has the least inclination to this exercise, and M. de Beaujollois is in this respect a most astonishing youth. Like his brothers, he will travel twenty leagues upon horseback, and two or three upon foot, in the same day, without being in the smallest degree fatigued; but it must be observed that he has been exercised from his earliest infancy in every thing that could render him strong and hardy. When he was put under my care he was only three years old; and there is not a child living, of his age, who possesses his agility, address, and strength. If these happy physical qualities were sedulously cultivated, at seventeen he would assuredly be a prodigy in this respect: but of this I have not the smallest hope, since within the four months that he has been no longer under my care, he has been made to give up almost all the exercises which I directed him to perform, and in which he excelled.

SWIMMING.

Of this too M. d' Orleans gave his children the first lessons, and has frequently swum with them since. They all swim perfectly well, leaping into the water head foremost. M. de Chartres saved the life of a man (inspector of bridges and roads at Vendome) who was on the point of being drowned, by leaping into the river the moment he heard his cries.

I know nothing of this art, but I recommended two things; that they should sometimes be thrown into the water with all their clothes on, because people are commonly in this state when they fall in by accident, and that they should be carefully instructed in the methods proper to be pursued to succour and bring to shore a person in danger of being drowned.

ARCHERY.

Neither M. de Chartres nor his brothers were fond of this exercise, which has in it more of gracefulness than utility; but Mademoiselle d'Orleans, and the young persons brought up with her, handled the bow with considerable dexterity.

SHOOTING.

As I was very desirous that my pupils should never be enamoured with the sports of the field, the delight only of the idle, and a passion fatal to the people before the revolution, I never encouraged them in this exercise, and they were therefore very indifferent about, and scarcely ever pursued it.

MILITARY EXERCISE,

which they partly learnt under my inspection. To this they applied themselves with zeal and activity.

BILLIARDS.

I had no desire that they should excel in this, for I wished them to have as little inclination for gaming

of any kind as for the chase. They played at billiards only by way of exercise, when the weather would not permit them to walk out; yet they played tolerably well.

SHITTLECOCK.

In this I procured a tennis-player to give them lessons. To play well, the racket must not be held before the player, near the stomach, nor above the head, but by the side, and thus the shittlecock is to be struck. Children should be accustomed to play equally with both hands.

DANCING,

may also be included in this recital of gymnastics.

These are all the exercises which I made them pursue, and the success exceeded my expectation, for in this branch of education I was less seconded and more thwarted than in any other. It was particularly on account of these that I was accused of having a systematic turn of mind, of being *wedded to systems*, &c. Those leaden soles, beds of wood, baskets, dumbbells, pitchers, and pulleys, were thought cruel and whimsical inventions. It was said at first, that *such foolish conceits, such extravagant systems, would kill the poor children, whose delicate constitutions were unable to support so Spartan an education.* Afterwards, when all these delicate children grew visibly more robust; when the defective shape of some of them entirely disappeared; when their health became daily more confirmed; when, without effort, they were able to bear fatigue which men would with difficulty have supported; when (their tempers and dispositions feeling the effects of their happy constitution of body), they became cheerful, active, and livey,

nothing more was said. My coadjutors, however, never presided with any degree of zeal at these exercises, which were in general performed well only when I was present. Either what I directed was forgotten, or was regarded with indifference and inattention. The six winter months which we spent in the capital were also detrimental to many of these exercises, particularly after the residence of the king was fixed at Paris. Before that period, we had a very charming garden within the precincts of the Thuilleries, where I had caused a leaping-ground to be made, and where my pupils went every morning to exercise themselves in running, jumping, and climbing trees. But having for the last two years been deprived of this garden, it was impossible they should make the same progress. I was very desirous of passing a whole year together in the country with my pupils, in a solitary place, and at a distance from any capital. Had it not been for the troubles by which France has been agitated, I should have executed this project during the last year that M. de Chartres was with me, and it is in this manner that every education ought to be finished: but I have never been able to effect but in part, and very imperfectly, the plans I have formed. I mention them, however, as far as I am able, in the hope that other preceptors may follow them, improve on them, and experience in their execution fewer obstacles and contradictions. Besides the moral advantages which would have accrued from a whole year of absolute solitude, and from studies pursued without interruption, at an age when the faculty of reason is expanded, I could have wished to accustom my pupils to the rigours of a winter in the country. I would have

have exercised them in sliding upon the ice, running in the snow, braving the severest cold, climbing slippery rocks covered with ice: for I would have chosen a wild and picturesque situation, and they would have admired nature under a new and austere form. Instead of this grand and striking spectacle, they have seen, during their winters, nothing but mist and mud, and their eyes have never been struck with the bright splendour of sheets of ice, and pure dazzling snow. Before I terminate this article on the subject of gymnastics, I ought to make one observation, which is of no small importance; that all bodily exercises are salutary only when their performance requires no painful exertion. If they fatigue, if they depress, if they leave behind them a continual sensation of pain and weariness, they debilitate instead of strengthen; but a due gradation in applying them, and an habitual use, render easy the most violent. The gradation must be varied according to the subject, and the best and safest rule that can be laid down is, to examine attentively and consult the child on every exercise which he is directed to perform. He should exert all his strength, but the weight should be diminished if it appear to occasion him the least pain. I will only say, in general, that the method of making a daily insensible addition is a very bad one. Twelve years ago I made this experiment, as to the pulley. Every day I put into the bag a tea-spoon-full of sand, and I found that the child strained as much to hoist it at the end of two months at the first day, which ought not to be the case. I then took out of the bag sixty tea-spoons-full. The child did not appear to raise it any easier at first, but in a fortnight he could do it with extreme facility. Thus at every

new exercise, or new addition, the child ought to strain a little, but without finding this effort painful. At the end of ten or twelve days he should not strain at all. If the contrary should take place, it is a proof that the weight is too great, and it ought to be diminished a little; and when the child has acquired the capability of hoisting or carrying a weight without difficulty, he ought to persevere for three or four months, at the end of which time the weight is to be increased to what he can bear without great exertion, unless the exercise has been interrupted; and in that case, on resuming it, the weight should be somewhat less than it was on his quitting it. When a child is in his fifth year, we ought to begin to exercise him in running, to make him carry light burdens, drive wheelbarrows, proportionated to his size, at first loaded with grass, afterwards with branches of trees, sand, &c. When he has completed his fifth year, leaden soles, very light and thin at first, should be added to his shoes. In the case of a girl, these soles should be fastened to the shoes by a ribbon passed round the bottom of the leg. This precaution is not necessary for boys, whose feet are not concealed by their clothes, and whose leather shoes are less liable to come off than stuff slippers. At six he should begin to carry the dosser and pitchers, and successively in the course of the year, all the exercises should be begun with light weights. My grandaughter, whom I am now educating, and who is just turned of five, hosts up thirteen pounds with the pulley, without any exertion. Three months hence, when the hot weather is over, I shall add two pounds more, for we should always take care to avoid increasing the weight during the excessive heat of summer.

Her shoes, with leaden soles, which she has been in the habit of wearing for four months, have, during the two past months, weighed ten ounces and a half; those of a child of the same age and size, weigh, without leaden soles, three ounces, and thus she carries an extra weight of seven ounces and a half, that is to say, nearly half a pound. This weight I shall not encrease these three months, and then only half an ounce, because the progressions of weight should be particularly slow and insensible, from the age of five to eight, on account of shedding the teeth, which takes place in that interval, during which we should be careful not to fatigue the child, tho' it is at the same time highly necessary to augment his strength. Another child, nine years of age, whom I have had under my care for twelve months, but whose physical education was before very defective, and whose constitution is extremely delicate, began these exercises only three months ago. She hoists with the pulley twenty pounds; her shoes, with leaden soles, weigh twelve ounces; those of Mademoiselle weigh two pounds; each shoe consequently weighs a pound. Mademoiselle carries in her dosser sixty-two pounds; but it is to be remarked, that the revolution in her health, occasioned by my departure, and the nervous effects that were the consequence, have thrown her back in all these exercises; she could not resume them till after an interruption of three months, and then with a diminution of all the weights. For example, before my departure she hoisted forty pounds with the pulley, and now she can hoist only thirty-four. Eight months ago M. de Beaujollois hoisted forty-seven pounds: he was then only eleven years old. I must observe, that a person never will be able

to raise with a pulley so great a weight as he can carry in his dosser. Mademoiselle d' Orelans carries in this way sixty-two pounds, yet she can hoist but thirty-four. M. de Chartres carries two hundred and twenty-six pounds, and hoists only ninety-six: meanwhile this was more than any man who came to the house could hoist with ease. From numerous observations which I have made, it appears to me, that the strongest man cannot hoist a weight greater than that of his own body, yet by habit he may be able to carry three or four times that weight. I have farther observed, that the increase of strength is particularly perceptible from fifteen to seventeen, especially in the last year. M. de Chartres, for example, carried at seventeen, two hundred and thirteen pounds; two months after he carried two hundred and twenty-six; at the expiration of three months he was preparing to increase this weight, when he set off for Vendôme. Unfortunately I have only been able to pursue this progression to the age of seventeen, never having had an opportunity of prolonging an education beyond that term; but I have reason to believe that this increase of strength continues at least to the age of twenty-four or twenty-five. Hence it would follow, that a young man, accustomed from his infancy to these progressive exercises,* and continuing them to that age would acquire a degree of strength of which we can scarcely form an idea. In this recapitu-

* These exercises gave M.de Chartres and his brothers a degree of bodily strength superior, beyond comparison, to what is usual at their age; yet, notwithstanding my vigilance, these exercises were in general neither well nor regularly performed. M. Lebrun, as I have said, disliked them, and they were therefore indolently executed, except under my own eyes. Judge then from the accounts I have given of the degree of bodily strength these children would have acquired, had all the tutors, in this respect, possessed my zeal and punctuality,

lation it has been seen, that I made them pursue certain studies and exercises with a view to the utility which may be derived from them in travelling. The following was my motive: I am of opinion that the education of a young man cannot properly be finished till the age of nineteen or twenty. I knew that my pupils would be taken from me as soon as they should have attained their seventeenth year; and I anticipated it, if not with dread, at least with regret, the moment when I should see them enter on an empty, trifling world, were the least fault to be acquired is a habit of idleness, and a dislike of study and serious conversation. I had sufficient confidence in the principles I had taught them, not to fear their falling into the vices and shameful irregularities so common in the present day: but I beheld them at an age when the mind is as yet not perfectly formed, and surrounded with all the examples and seductions which retard the progress of reason, blind the understanding, deprave the taste, and debilitate the soul. The only way that appeared to me calculated to preserve them from these dangers was to inspire them early with a desire of travelling as soon as they should be their own masters. It is by no means difficult to impart this desire to those who have imbibed every species of knowledge which can render travelling truly agreeable. I took care that they should learn to travel with advantage, to make a journal, to discriminate wisely, to enquire, to listen, and to derive information from every thing they might see. After these cares, I was certain that, if they were permitted, the first use they would make of their liberty would be to traverse all the provinces of France, and then to visit foreign nations. There

they might without my assistance, have completed their education. Travelling cannot benefit an ignorant young man, who has no knowledge of history and the arts: upon the road, he travels post from place to place; in cities, he goes to the play and other public amusements, is presented at the houses of the great, and spends his time in visits. He might as well stay in Paris. But a well-informed youth, properly educated, sees every thing with a degree of interest and curiosity; he will not be constantly shut up in a carriage, but will perform the greater part of his journey upon foot, or upon horseback; he can admire a beautiful landscape, and knows how to transfer it to paper: he will examine the plants with which he is unacquainted; the manners of the peasant will be far more interesting to him than those of the metropolis; frequently will he stop at the door of a cottage; willingly will he repose in a barn; he who has been accustomed to sleep upon boards will not be distressed because his lodging is homely. If in order to see a natural curiosity, a grotto, a singular cascade, it be requisite to climb steep rocks, to walk in narrow paths, formed by nature, upon the brow of a precipice, to descend into a deep cavern by the help of a ladder or a single rope, he will not hesitate he will go without fear and without danger, for these were the sports of his infancy. Should it be necessary, in a desert that can be traversed only upon foot, to carry two days provision, he will cheerfully share the fatigue with his guide; he will say; *This burden is nothing, my dosser weighed a hundred and fifty pounds more.** Should he visit a sea-port, he

* Three years ago M. de Chartres made this answer to a person who asked him the day on which he was admitted a knight of the order, if he were

will make some stay there; he will compare the wealth, industry, and resources of this foreign mart with those of his own country already familiar to him. He will go into all the manufactories, into the dock-yards, on board the vessels; he will enjoy and feel all the value of the esteem shewn him by his conductors, who in their turn will be astonished to see a Frenchman of seventeen well informed without being vain. Having satisfied the veteran seamen with the solidity of his knowledge, he may possibly have the ambition to astonish the young mariner by his activity, and, before he quits the ship, spring with agility to the yard-arm or the mast-head. In cities he will frequent society, to learn their manners and customs, but it will be society of his own choosing; as he loves neither gaming nor the pleasures of the table, he will not visit those who keep open houses; he will seldom also be seen in palaces of kings: he seeks new objects, all courts resemble each other, and he who has seen one knows all. Fond of literature and the arts, he will be eager to find out those who cultivate them with success; he will derive no small pleasure in conversing with them in their own language, in shewing them that he is not ignorant of the history of their country, and that he is a stranger to no kind of knowledge. With them he will visit the cabinets of the curious, and the workshop of the artist. All the studies which he has just quitted will thus repass before his eyes; and the celebrated pictures, the monuments, and chefs d' œuvres of the arts of every kind which he sees will be engraven so much the more deeply in his memory, as he is acquainted

not oppressed with the *immense weight* of his velvet cloak, embroidered with gold.

with them before-hand from accurate descriptions. On his return to his hotel, he will not be idle; he knows how to write a journal, a work that will habituate him to every kind of composition: in his will be found sound criticism, striking relations of customs and manners, sage reflections on laws and government, curious anecdotes, fragments of history, descriptions, and every thing that can paint men and interest the world. In this manner, I dare believe, my pupils would have acted, had it been in their power to travel when they quitted me; and this hope and these motives had a considerable influence in the plan of education I pursued.

"Lessons of a Governess to her Pupils."

A PETITION,

to those who have the Superintendency of Education.

BY BENJAMIN FRANKLIN.

I address myself to all the friends of youth, and conjure them to direct their compassionate regards to my unhappy fate, in order to remove the prejudices of which I am the victim. There are twin sisters of us: and the two eyes of man do not more resemble, nor are capable of being on better terms with each other, than my sister and myself, were it not for the partiality of our parents who make the most injurious distinctions between us. From my infancy, I have been led to consider my sister as a being of a more elevated rank. I was suffered to grow up without the least instruction, while nothing was spared in her education. She had masters to teach her writing, drawing, music, and other accomplishments;

but if by chance I touched a pencil, pen, or needle, I was bitterly rebuked: and more than once I have been beaten for being awkward, and wanting a graceful manner. It is true, my sister associated me with her on some occasions; but she always made a point of taking the lead, calling on me only from necessity, or to figure by her side. But conceive not, sirs, that my complaints are instigated merely by vanity. No; my uneasiness is occasioned by an object much more serious. It is the practice in our family that the whole business of providing for it's subsistence falls upon my sister and myself. If any indisposition should attack my sister (and I mention it in confidence, on this occasion, that she is subject to the gout, the rheumatism, and cramp, without making mention of other accidents) what would be the fate of our poor family? Must not the regret of our parents be excessive, at having placed so great a difference between sisters who are so perfectly equal? Alas! we must perish from distress: for it would not be in my power even to scrawl a suppliant petition for relief, having been obliged to employ the hand of another in transcribing the request which I have now the honour to prefer to you. Condescend, sirs, to make my parents sensible of the injustice of an exclusive tenderness, and the necessity of distributing their care and affection among all their childen equally. I am with a profound respect,

sirs,

your obedient servant,

THE LEFT HAND.

ON THE ART OF SWIMMING.

BY THE SAME.

The specific gravity of some human bodies, in comparison to that of water, has been examined by Mr. Robinson, in the American Philosophical Transactions, volume 50, page 30, for the year 1757. He asserts that fat persons with small bones float most easily upon water. When I was a boy, I made two oval pallets each about ten inches long, and six broad, with a hole for the thumb, in order to retain it fast in the palm of my hand. They much resemble a painter's pallets. In swimming I pushed the edges of these forward, and stuck the water with their flat surfaces as I drew them back. I remember I swam faster by means of these pallets: but they fatigued my wrists. I also fitted to the soles of my feet a kind of sandals; but I was not satisfied with them, because I observed that the stroke is partly given by the inside of the feet and the ancles, and not entirely with the soles of the feet. We have here waistcoats for swimming, which are made of double sailcloth, with small pieces of cork quilted in between them. I know, by experience, that it is a great comfort to a swimmer, who has a considerable distance to go, to turn himself sometimes upon his back, and to vary in other respects the means of procuring a progressive motion. When he is seized with the cramp in the leg, the method of driving it away, is to give to the parts affected, a sudden, vigorous, and violent shock; which he may do in the air as he swims upon his back. During the great heats of summer, there is no danger in bath-

ing, however warm we may be, in rivers which have been thoroughly warmed by the sun. But to throw onesself into cold spring water, when the body has been heated by exercise in the sun, is an imprudence which may prove fatal. I once knew an instance of four young men, who, having worked at harvest in the heat of the day, with a view of refreshing themselves, plunged into a spring of cold water: two died upon the spot, a third the next morning, and the fourth recovered with great difficulty. A copious draught of cold water, in similar circumstances, is frequently attended with the same effect in North America. The exercise of swimming is one of the most healthy and agreeable in the world. After having swum for an hour or two in the evening, one sleeps cooly the whole night, even during the most ardent heat of summer. Perhaps the pores being cleansed, the insensible perspiration increases, and occasions this coolness. It is certain that much swimming is the means of stopping a diarrhœa, and even of producing a constipation. With respect to those who do not know how to swim, or who are affected with a diarrhœa at a season which does not permit them to use that exercise, a warm bath, by cleansing and purifying the skin, is found very salutary, and often effects a radical cure. I speak from my own experience, frequently repeated, and that of others to whom I have recommended this.

The ordinary method of swimming is reduced to the act of rowing with the arms and legs, and is consequently a laborious and fatiguing operation when the space of water to be crossed is considerable; there is a method in which a swimmer may pass to great distances, with much facility, by means of a sail. This

discovery I fortunately made by accident, and in the following manner. When I was a boy, I amused myself one day with flying a paper kite; and approaching the bank of a pond, which was nearly a mile broad, I tied the string to a stake, and the kite ascended to a very considerable height above the pond, while I was swimming. In a little time, being desirous of amusing myself with my kite, and enjoying at the same time the pleasure of swimming, I returned; and losing from the stake the string with the little stick which was fastened to it, went again into the water, where I found, that, lying upon my back and holding the stick in my hands, I was drawn along the surface of the water in a very agreeable manner. Having then engaged another boy to carry my clothes round the pond, to a place which I pointed out to him on the other side, I began to cross the pond with my kite, which carried me quite over without the least fatigue, and with the greatest pleasure imaginable. I was only obliged occasionally to halt a little in my course and resist it's progress, when it appeared that, by following too quick, I lowered the kite too much; by doing which occasionally I made it rise again. I have never since that time practised this singular mode of swimming, tho' I think it not impossible to cross in this manner from Dover to Calais. The packet-boat, however, is still preferable.

ON SLEEP.

BY THE SAME.

As a great part of our life is spent in sleep, it may not be useless to examine what is the art of enjoying undisturbed repose. To this end it is, in the first place, necessary to be careful in preserving health by due exercise and great temperance; for, in sickness, the imagination is disturbed; and disagreeable, sometimes terrible, ideas are apt to present themselves. Exercise should precede meals, not immediately follow them: the first, promotes, the latter, unless moderate, obstructs digestion. If, after exercise, we feed sparingly, the digestion will be easy and good, the body lightsome, the temper cheerful, and all the animal functions performed agreeably. Sleep, when it follows, will be natural and undisturbed. While indolence, with full feeding, occasions night-mares and horrors inexpressible: we fall from precipices, are assaulted by wild beasts, murderers, and demons, and experience every variety of distress. Observe, however, that the quantities of food and exercise are relative things: those who move much may, and indeed ought to eat more; those who use little exercise should neat little. In general, mankind, since the improvement of cookery, eat about twice as much as nature requires. Suppers are not bad, if we have not dined; but restless nights naturally follow hearty suppers after full dinners. Indeed, as there is a difference in constitution, some rest well after these meals; it costs them only a frightful dream, and an apoplexy; after which they sleep till doomsday. Nothing if more common in the newspapers, than instances os

people who, after eating a hearty supper, are found dead in bed in the morning. Another means of preserving health, to be attended to, is the having a constant supply of fresh air in your bed-chamber. It has been a great mistake, the sleeping in rooms exactly closed, and in beds surrounded by curtains. No outward air, that may come in to you, is so unwholesome as the unchanged air, often breathed, of a close chamber. As boiling water does not grow hotter by longer boiling, if the particles that receive greater heat can escape; so living bodies do not putrify, if the particles, as fast as they become putrid, can be thrown off. Nature expels them by the pores of the skin and lungs, and in a free open air they are carried off; but, in a close room, we receive them again, and again, tho' they become more and more corrupt. A number of persons crowded into a small room, thus spoil the air in a few minutes, and even render it mortal, as in the Black Hole at Calcutta. A single person is said to spoil only a gallon of air per minute, and therefore requires a longer time to spoil a chamber-full; but it is done, however, in proportion, and many putrid disorders hence have their origin. Physicians, after having for ages contended that the sick should not be indulged with fresh air, have at length discovered that it may do them good. It is therefore to be hoped that they may in time discover, likewise, that it is not hurtful to those who are in health; and that we may be then cured of the *aërophobia* that at present distresses weak minds, and makes them choose to be stifled and poisoned, rather than leave open the window of a bed-chamber, or put down the glass of a coach. Confined air, when saturated with perspirable mat-

ter,* will not receive more: and that matter must remain in our bodies, and occasion diseases: but it gives some previous notice of it's being about to be hurtful, by producing certain uneasiness, slight indeed at first, such as, with regard to the lungs, is a tickling sensation; and to the pores of the skin a kind of restlessness which is difficult to describe, and few who feel it know the cause of it. But we may recollect, that sometimes, on waking in the night, we have, if warmly covered, found it difficult to get asleep again. We turn often without finding repose in any position. This fidgettiness, to use a vulgar expression for want of a better, is occasioned wholly by an uneasiness in the skin, owing to the retention of the perspirable matter; the bed-clothes having received their quantity, and, being saturated, refusing to take any more. To become sensible of this by an experiment, let a person keep his position in the bed, but throw off the bed-clothes, and suffer fresh air to approach the part uncovered of his body; he will then feel that part suddenly refreshed; for the air will immediately relieve the skin, by receiving, licking up, and carrying off, the load of perspirable matter which incommoded it. For every portion of cool air that approaches the warm skin, in receiving it's part of that vapour, receives therewith a degree of heat that rarefies and renders it lighter, when it will be pushed away, with it's burden, by cooler, and therefore heavier fresh air; which, for a moment, supplies it's place, and then, being likewise changed, and warmed, gives way to a succeeding quantity, This

*What physicians call the perspirable matter, is the vapour which passes off from our bodies, from the lungs, and through the pores of the skin. The quantity of this is said to be five-eights of what we eat.

is the order of nature, to prevent animals being infected by their own perspiration. He will now be sensible of the difference between the part exposed to the air, and that which, remaining sunk in the bed, denies the air access: for this part now manifests it's uneasiness more distinctly by the comparison; and the seat of the uneasiness is more plainly perceived, than when the whole surface of the body was affected by it. Here, then, is one great and general cause of unpleasing dreams. For when the body is uneasy, the mind will be disturbed by it, and disagreeable ideas of various kinds will, in sleep, be the natural consequences. The remedies, preventative, and curative, follow: 1. By eating moderately (as before advised for health's sake), less perspirable matter is produced in a given time; hence the bed-clothes receive it longer before they are saturated; and we may, therefore, sleep longer, before we are made uneasy by their refusing to receive any more. 2. By using thinner and more porous bed-clothes, which will suffer the perspirable matter more easily to pass through them, we are less incommoded, such being longer tolerable. 3. When you are awakened by this uneasiness, and find you cannot easily sleep again, get out of bed, beat up and turn your pillow, shake the bed-clothes well, with at least twenty shakes, then throw the bed open, and leave it to cool; in the meanwhile, continuing undrest, walk about your chamber, till your skin has had time to discharge it's load, which it will do sooner as the air may be drier and colder. When you begin to feel the cold air unpleasant, then return to your bed; and you will soon fall asleep, and your sleep will be sweet and pleasant. All the scenes pre-

ented to your imagination will be of the pleasing kind. I am often as agreeably entertained with them, as by the scenery of an opera. If you happen to be too indolent to get out of bed, you may, instead of it, lift up your bed-clothes with one arm and leg, so as to draw in a good deal of fresh air, and, by letting them fall, force it out again. This repeated twenty times will so clear them of the perspirable matter they have imbibed, as to permit your sleeping well for some time afterwards. But this latter method is not equal to the former. Those who do not love trouble, and can afford to have two beds, will find great luxury in rising, when they awake in a hot bed, and going into the cool one. Such shifting of beds would also be of great service to persons ill of a fever, as it refreshes, and frequently procures sleep. A very large bed that will admit a removal so distant from the first situation as to be cool and sweet, may in a degree answer the same end. One or two observations more will conclude this little piece. Care must be taken, when you lie down, to dispose your pillow so as to suit your manner of placing your head, and to be perfectly easy; then place your limbs so as not to bear inconveniently hard upon each other, as, for instance, the joints of your ancles: for tho' a bad position may at first give but little pain, and be scarcely noticed, yet a continuance will render it less tolerable, and the uneasiness may come on while you are asleep, and disturb your imagination.

A CURIOUS AND MOMENTOUS CALCULATION.

The difference between rising every morning at six and at eight, in the course of forty years (supposing a person should go to bed at the same times he otherwise would) amounts to 29,000 hours, or three years, one hundred and twenty-one days, six hours: so that it is just the same as if ten years of life (a weighty consideration) were to be added; to which we might command eight hours every day, for the cultivation of our own minds in knowledge and virtue, or the dispatch of business.

This calculation is made without regard to the bessextile, which reduces it to three years, one hundred and eleven days, sixteen hours; and at eight hours a day, will want about a month of ten years.

ON EDUCATION.

Whatever tends to impress habits of *order* on the expanding mind may be reckoned the most beneficial part of education: for by this means the surest foundation of virtue is settled without a struggle, and strong restraints knit together before vice has introduced confusion. It has been a custom too prevalent, to make children learn by rote long passages from authors, to whose very expressions they could not annex an idea, not considering how vain and cruel it is, to compel them to repeat a round of unintelligible words. Parents are often led astray by the selfish desire of having a wonderful child to exhibit; but these monsters very seldom make sensible men or women: the wheels are impaired by being

set in motion before the time pointed out by nature, and both mind and body are ever after feeble.

When children arrive at a more advanced age, it would be useful to make them read a short lesson, and then transcribe it from memory; afterwards let them copy the original, and let them remark the mistakes they have made.

Preface to "Cresswick's Reader."

CONTENTS.

	page.		page.
On Education, by S. J. Pratt	3	On the Art of Swimming, by the same	31
On Gymnastics, by the Comtesse de Genlis	11	On Sleep, by the same	34
A Petition to those who have the Superintendency of Education, by Dr. Franklin	29	A curious and momentous Calculation	39
		On Education	39

G. Nicholson Poughnill.

ON

CLOTHING.

Published Sept.1.1800. by George Nicholson, Poughnill near Ludlow.

ADVERTISEMENT.

It has been objected to a former edition of this pamphlet, that "the free and open discussion of some subjects relating to the animal economy, renders any purpose of putting it into the hands of children and the female sex improper." It is readily acknowleged, that a book of the greatest utility to an adult, may be prematurely put into the hands of a child; and a very slight inspection into the plan of the publication, of which this forms one number, will discover that a few subjects only are immediately intended for the use of children. In obviation of the latter part of the charge, the compiler cannot allow that man is a being privileged to investigate the arcana of nature, to the exclusion of woman; especially where both sexes are mutually concerned and interested. There appears a degrading intention couched in such conduct. A lady might not, indeed, choose to receive a physical treatise from the hands of a very distant acquaintance, from a fear of his deducing an unfavourable or dishonourable opinion of her character, but a well-informed woman would not hesitate a moment to receive such a book from a parent, a guardian, or a friend, and it might furnish subjects for conversation, without any impression of indecorum, impropriety, or indelicacy. Most undoubtedly, if books, treating of the human frame were more read and understood, the passions would be better managed or controuled, mankind rendered more virtuous and healthy, and many evils avoided into which inexperience plunges them. Why should subjects, serious in themselves, be ever lightly treated? Can even the sexual propensity deserve a more trifling discussion, or advertence to, than that of any other animal propensity, to which mankind are addicted? "Take shame to yourselves, ye men of discretion," who wantonly join in such violations! The sexual intercourse is daily adverted to, by servants and superiors of families, *in the presence of children*, in a manner the most ambiguous and mysterious; a manner, above all others, calculated to awaken curiosity and enquiry; accompanied, as the subject al-

ways is, with much apparent interest, emotion, or risability. It may be asserted with confidence, that more serious injury has been excited in the morals and health of children, by this abominable conduct in their seniors, than by the whole train of children's usual bad habits put together. Let, by all means, the passions be kept dormant as long as possible, yet let not any enquiry be evaded, but judiciously answered, having regard to the age and constitution of the child; and let the structure of the human frame be explained, accompanied by salutary admonitions and cautions. A German writer, the Rev. C. G. Salzmann, says, "Impurity is now spread so far that even children are infected, and by it the germe of every virtue, as well as the germe of their posterity, which the Creator has implanted in them, is destroyed." And adds, "I am thoroughly persuaded that the most efficacious method to root out this dreadful evil, which poisons the source of human happiness, would be to speak to children of the organs of generation as freely as we speak of the other parts of the body, and explain to them the use which they were designed for, and how they may be injured."

In this compilation we are indebted for a very considerable portion of the important, salutary, and ingenious advice therein contained, to Dr. Faust's "Essay on a peculiar and notional Dress for Children," translated from the German, 12mo, Johnson, London; to Dr. Vaughan's "Essay, philosophical and medical, concerning modern Clothing," 8vo. Robinsons, London; and to Dr. Willich's "Lectures on Diet and Regimen," 8vo. Longman and Co., London.

ON CLOTHING.

On the Custom of wearing Clothes.

"On a supposition that mankind had always been accustomed to wear clothes, it is not easy to conceive how any number of them should ever determine to throw them aside again, and go naked; because a regard to their health, which would suffer extremely by so disadvantageous a change, and a regard to modesty and shame will also ever incline them to the contrary: and yet we find the practice of going naked is still persisted in by several nations; which evidently indicates it to have been the natural, universal, and original state of all mankind. There are some nations who being accustomed to no defence for their bodies, never trouble themselves for any, even when they go to war, but whole armies of naked men engage in the hottest actions." [Charron "On Wisdom," b. 1.] Much perhaps might be said against the necessity of an indiscriminate use of clothing in general, in the mildest seasons of every climate. It is plain, that custom only renders that impossible to us, which really is not so. For of those nations, who have no idea of clothing, some are situated under the same climate with ourselves, and some under much severer climates. And, besides, our most tender parts are always exposed to the air, such as the eyes, mouth, nose, and ears; and our peasants, like our ancestors in former times, go open-breasted to the waist." [Montaigne, b. 1.]

The air, which has the most salutary influence on the vegetable and animal kingdoms, without which plants and animals wither, is by our clothes secluded from the body. This is a most pernicious effect of clothing, and makes the body wither also.

The skin has not only evaporating, but also absorbent vesels, without number. The atmosphere of acrid vapours and mephitic air, created round the body by warmth and perspiration, cannot be dispelled by the fresh external air on account of our preposterous mode of clothing. These acrid vapours and mephitic air are therefore re-absorbed by the numberless vessels of the skin, hence it is evident why the body and the life of man are so wan, feeble, and joyless. The heat and vapour generated by clothing, and the want of fresh air, enervate the body, subject it to frequent colds, and rheumatic complaints, which are the lot of almost every mortal. By this heat the human body, like the plant in a hothouse, ripens sooner than it ought to do in the common course of nature.

On the Materials of Dress.

The property of receiving, repelling, and emitting heat and cold, depends not only on the substance from which our dress is made, and it's shape and form, but also on the colour. Clothes of a light colour have the least attraction for heat, and therefore are the most proper in hot weather.

DAZZLING COLOURS are offensive, and a person who suffers from weak eyes will injure them still more by wearing crimson or scarlet, or being much in company with others thus dressed. For a similar reason, splendid white dresses, steel-buttons, gold and silver

lace, and all ornaments of this sort, are detrimental to vision. ANIMAL WOOL produces a moderate warmth, on account of the stimulus and gentle friction it occasions on the skin. By it's use, animal electricity is elicited, perspiration promoted, the perspired humours are absorbed, and again easily evaporated, on account of the porous nature of this substance. This covering may therefore be particularly and strongly recommended to those afflicted with rheumatic or gouty complaints. LINEN CLOTH, by diminishing the elasticity of the skin, increases the internal warmth, and, at the same time, by it's compactness, retains too readily the perspirable humours, and does not part with them so readily as wool. Soiled shirts therefore produce a disagreeable cooling sensation, and stop perspiration, especially if made of thick strong cloth, and not regularly changed. SILK occasions a gentle stimulus, but does not sufficiently promote perspiration, tho' it attracts less humidity from the atmosphere than linen. OIL-SKIN, or wax-cloth, increases perspiration in an uncommon degree, but does not admit it to evaporate again, and is therefore applicable only in certain diseases. COTTON stands between animal wool and linen; it increases warmth and perspiration, imbibes and retains the perspired humours, to the injury of the wearer, and, like wool, readily attracts infectious matter. All kinds of FUR are more noxious than useful, both with respect to their structure and constituent parts. They contain many alkaline and oily particles; the leather is too compact and does not suffer the perspiring particles to fly off. The consequence is, that a continual vapour-bath is form-

ed between the fur and the skin, that a great part of the impure matter is again thrown back on the body, and imbibed by it. Fur soon acquires an intolerable smell, and more than any other substance attracts and retains contagious effluvia. Experience informs us, that nations who dress in fur, particularly in hot countries, are frequently exposed to diseases, owing to a want of cleanliness and free perspiration; such are the putrid fevers of Hungary, the plague among the Turks, and the singular disease of the hair in Poland, called *plica polonica*, which curls the whole hair into a number of twists, that have the appearance of so many greasy strings, and afford a ghastly spectacle. We ought, therefore, to choose a dress agreeable to the season and weather, as well as to the constitution of the body. In our variable climate, it would be preferable to adopt a species of dress, which is nearly uniform in all seasons. There appears no danger in doing this; on the contrary, it is the most beneficial plan of managing the body, with regard to the most important function, namely, that of perspiration.

On covering the Head.

Coverings of the head are very detrimental to health of body and mind. The brain receives one-fifth of the whole mass of the blood, and eight times more than the other parts of the body. [Haller "Element. Physiolog." t. iv. l. x. sec, v, § 20.] The WARMTH occasioned by covering the head increases the quantity still further, and if in addition to this the veins of the neck are pent up and the reflux of the blood impeded by shirt-collars, stocks, and cravats, a perennial accumulation of the blood, and pressure of the

brain, are inevitable, the whole frame languishes under a slow paralysis: stupidity, drowsiness, indolence, and lameness, must be the consequence; the secretion of the nervous fluid in the brain goes on heavily, and cannot vivify body and mind: the turgid brain is incapable of clear sensual impressions, and man staggers through life, void of sense, reason, and joy. VERMIN and SCALDHEADS are another consequence of warm coverings of the head and want of fresh air; the mischief they do is astonishing; they are certainly to be reckoned among the great plagues of the human race. The head naturally has a small inclination to the earth; by the weight of coverings it becomes depressed; this is an additional reason for abolishing coverings of the head in the dress of children. For some years THE LADIES, instead of those horrid masses of frizzled hair, which used at once to injure their health, and disfigure their faces, happily returned to beautiful and elegant nature; having their hair hanging down in graceful ringlets, while the only artificial covering was a simple turban, or an ornamental bandeau. Of late, however, this tasteful style of decoration has been succeeded by unnatural, disgusting, and unhealthful *wigs;* a fashion probably introduced by some ugly and bald woman, to reduce her gay and beautiful imitators to her own standard of deformity.

The well known and excellent rule, of keeping the head cool and the feet warm, is too much neglected, especially by the lower classes of the people in many countries, as in Scotland, Holland, and Germany, and likewise among people of a certain age and description in this country. The Scotch peasant wears his heavy bonnet, the Dutchman his cap, and the

Turk his turban, without considering that such heavy loads are stupifying, and that, while no attention is paid to keeping their feet warm and dry, their heads are virtually converted into vapour-baths. In all countries, the man who lives at his ease, carefully covers his head with a warm night-cap; he spends perhaps one half of the day in this unnatural dress, and prepares his head for frequent colds, at every sudden change in the atmosphere. Besides, weakness of the head, pains, eruptions, local plethora or fulness of blood, loss of the hair, lethargy, and at length stupor or insanity are often the effects of this imprudence. In our moderate climate we might safely accustom our youth to go with the head uncovered: as nature has already provided it with hair for that purpose. In very cold or hot countries, however, the head must be slightly covered, to shelter it from cold, or from the still more dangerous vertical rays of the sun. To go with the head uncovered, in sunshine, is certainly improper, both for children and adults; but black hats are ill calculated to avert the mischief, as they do not reflect the heat, but rather concentrate it in the most sensible manner upon the head. This PROPERTY OF COLOUR has been frequently demonstrated by placing black and light drab-coloured pieces of cloth upon snow, while the strong rays of the sun have fallen upon them. The snow began to melt round the black, while that about the light colours was not more affected than the snow upon which no pieces were laid. A burning lens will set fire to dark coloured substances, while light colours are with difficulty or not at all affected. Hats of a white, or other light colour, made of straw or similar light materials, would be far preferable, particularly

for people labouring in the fields, soldiers, and travellers. In very hot weather, a piece of white paper may be fastened with advantage upon the crown of the hat. As the hat ought likewise to shelter the eyes from too vivid a light, the brim should be broad enough to protect them, and the inner side of a green or blue, but not of a black, or a dazzling colour. Persons suffering from periodic head-achs, or whose heads are otherwise unhealthy, should have their hair cut short. By this petty sacrifice, they will promote the necessary perspiration, the head will remain cool, and the cold bathing of it can be practised with more advantage. In this point of view, wigs cannot be *altogether* condemned, as long as hair-dressing, artificial braids, and other ornaments, form an essential part of fashionable dress. A *light wig* is justly preferable to a head enveloped in an artificial paste of powder and pomatum. The ancients went with their heads uncovered: Suetonius says of Julius Cæsar, "He was perfect in the use of arms, and in equestrian exercises, inured to labour beyond conception: he marched at the head of his troops, sometimes upon horseback, oftener upon foot, bareheaded, whether it was rain or sunshine;" [Suetonii Jul. Cæsar. p 45. Lugdun. Batav. 1645,] and Silius Italicus, says of Hannibal, "a noble leader of the thronging host, the Carthaginians saw him give the rule, his head uncover'd, heedless of the storm." [Silius Italicus, l. 1. v. 249—252.] "King Massinissa, to an extreme old age, could never be prevailed on to go with his head covered, how cold, stormy, or rainy soever the weather might be; the same thing is related of the emperor Severus. Herodotus says, that in the battles fought between the Egpytians and

the Persians, it was observed, both by himself and others, that of those who remained dead upon the field, the heads of the Egyptians were, without comparison, harder than those of the Persians, because the latter cover their heads from their infancy, first with biggins and then with turbans, whereas the former go always shaved and bare. And king Agesilaus, to a descripit age, made it a rule to wear the same sort of clothing in winter and summer. Plato strongly advises, for the health of the whole body, to give the head and feet no other covering, than what is bestowed by nature." [Montaigne, b. 1.]

Neck Bandages.

The nerves, arteries, veins, and muscles, which run along the neck up to the head of the wind-pipe, the organ of speech and song, as well as the wind-pipe itself, are much injured and debilitated by stocks, and other bandages round the neck, which tho' in general worn by males only, operate nevertheless on the female sex by propagation. Compressing the neck has caused a loss of voice; [Hist. de l' Acad. de Paris, 1705.] and injuring the muscles of the larynx, weakens the voice, because these muscles receive nerves from the recurrent branches of the eight pair. "I have seen," says Dr. Willich, "several instances of people attacked with shortness of breath and difficulty of speech, from this reason only, because the blood cannot circulate freely, if the neck and wrists be tied or buttoned up too closely. I was once present where a young man, playing at rackets, was suddenly seized with an apoplectic fit, the cause of which seemed at first inexplicable. As soon, however, as his shirt collar, wristbands, and gar-

ters were loosened, he recovered." Neck-cloths, cravats, ribands, and necklaces of all sorts, *when they are too tight*, stop the access and retreat of the blood to and from the head, occasion accumulations of the blood and other fluids, head-achs, faintings, stupor, apoplexy, corrosive ulcers of the skin, and innumerable other maladies. All coverings of the neck ought therefore to be constantly worn loose. People who are liable to sore throats, and diseases of the breast, might gradually accustom themselves, in mild and dry weather, to go with their necks as slightly covered as possible, and if fashion would permit it, to have no other covering but the collar of the shirt. In cold and moist weather, a thin handkerchief might be added. But the modern cravats, filled with a stiffening of cotton or wool, are extremely injurious to the part which they are intended to protect. For, by occasioning too great heat, they render the neck unnaturally sensible to every change of the atmosphere. It is rather surprising, that from a due sense of their perniciousness, we have rejected all coverings of the neck in children, as being troublesome and useless: and yet in defiance of reason and experience, we continue to incumber our own necks with such bandages. Neck-laces and ribands, likewise, are generally tied so close, as to press with violence upon that supposed deformity of the throat, vulgarly called Adam's apple, which projects less in the female than in the male sex. These ribands and necklaces, when worn tight, are the more inconvenient and dangerous, if they be narrow and edged. On taking them off, which is too frequently neglected at night, they leave an impression on the neck, clearly proving that they impede the free muscular ac-

action, and occasion stagnations, pain, and other dangerous consequences. The neck and throat, being alternately expanded, and contracted, in speaking, chewing, and swallowing, it is the highest degree of imprudence to obstruct it's motion, either for the sake of appearance, vanity, or fashion. Equally objectionable are those black stocks, that were formerly much in fashion, and are still worn by some old beaux and military men. The latter, indeed, deserve our compassion, from being obliged to wear those uncomfortable collars; but the former ought to consider, that they expose themselves to dangers, increasing as they advance in age, and rendering them every day more liable to apoplexy. "I knew a regiment of soldiers on the continent," says Dr. Willich, "whose colonel was so excessively fond of what he considered a martial appearance, that he caused his officers and men to have every article of their uniform remarkably tight, particularly the stocks, waistbands, and knee-garters. The consequence was, that in the course of a few months, above the half of his regiment became subject to very obstinate cutaneous diseases, and other obstructions, so that they were unable to perform duty. Other regiments in the vicinity also suffered from this destructive custom; but the proportion of their disabled soldiers was like one to ten of the former." The late Dr. Fothergill asserts, that these tight stocks are productive of apoplexy, if a person look for some time, with his head turned, without moving his body. By this alone, he believes, people have brought on apoplectic symptoms. For such a turn of the neck, when the body stands fixed, diminishes the diameter of the jugular veins so much, that a proportionate quantity of blood

cannot return to them, from the vessels of the head and the brain.

Coat and Gown Sleeves, &c.

The arm of a woman is by nature somewhat taper from the tip of her shoulder, becoming smaller downwards to her wrist: but that of a man is always, or ought to be, largest a little below his elbow. Hence it appears why the sleeves of a woman's gown may compress generally, and why the sleeves of a man's coat can only compress partially. Very tight coat sleeves prevent the hand from grasping and holding any thing long; and if nothing be grasped, the veins upon the back of the hands will swell. Neither can a person write in such sleeves, or with proper steadiness and command; nor lean upon a desk without benumbing the fingers. Now if partial compression below the elbow can excite such inability and pain, what may not the general compression of a woman's sleeves excite? The ends of shift or gown sleeves, whether they be simple hems, or bands, like the wrist-bands of a shirt, may compress in a very great degree: for they yield little, or not at all, when the arms are moved. The ends of shift-sleeves compress like the ligature applied previous to blood-letting; and they have been known to compress as much. Instances are not wanting where the gown-sleeves were so tight that the blood could not be stopped till they were cut.

Stays, Waistcoats, &c.

The tightness of our clothes, and the different bandages of which they consist, compress the veins and lymphatic vessels immediately under the skin

and injure the animal economy exceedingly. The weight and pressure of our heavy tight clothing cramp the whole frame, and particularly narrow the breast. That our bodies are cramped is ascertained beyond a doubt (proofs of it may be found in the *Recherches et Considerations sur la Population de la France*, par M. Moheau, tom. i. c. 9). The pressure of the female dress upon the breasts not only enfeebles and spoils the breasts but in a great measure destroys the nipple, even during childhood; many new-born infants suffer exceedingly on this account. And tho' the nipple may not be totally destroyed, it is always poor and feeble, witness the excuciating sufferings of mothers from sore nipples, by which they are often rendered incapable of suckling their children. The dress of the female sex has been very exceptionable. How far it was elegant and tasteful, may not properly be decided here. It is well known, that a loose and easy dress contributed much to give both sexes those fine proportions of body, that are observable in the Grecian statues, and which serve as models to our present artists; nature being too much disfigured among us to afford them any such. The Greeks knew nothing of those gothic shackles, that multiplicity of ligatures and bandages, with which our bodies are compressed. Their women were ignorant of the use of whalebone stays, by which some of our's yet distort their shape, instead of displaying it. Can it be a pleasing sight to behold a woman cut in two in the middle, as it were, like a a wasp? on the contrary, it is as shocking to the eye, as it is painful to the imagination. A fine shape, like the limbs, hath it's due size and proportion; a diminution of which is certainly a defect. Such a de-

formity also would be striking in a naked figure; wherefore, then, should it be esteemed a beauty in one that is dressed? Fortunately, *laced stays* are among the higher ranks of society, at present, out of fashion, and the Grecian costume is very justly preferred; but so transitory is fashion, and so little founded on reason, that the example of a court lady is amply sufficient, to introduce again, the *strait jacket*, with it's extremes of ungracefulness and evil; and amply as the Grecian form allows women to dress at ease, it is observable that tight coverings are yet predominent. All that has been said respecting laced stays, is also applicable to tight coverings of the breast and abdomen. If such a dress as stays be admissable, they should be made of soft and pliable materials, as the knitted and elastic substance used for stockings or gloves. How absurdly does fashion vary in extremes! The unnatural and unhealthful custom of tapered waists was no sooner relinquished, than the fair sex endeavoured to conceal the waist entirely. Instead of a cincture round the middle of the body, as nature and taste directed, they bound themselves over the breasts, a custom not less preposterous than injurious to health.

Gloves.

It is improper and unhealthy to wear any other but woollen gloves, which ought to be worn by all females, who wish to improve the skin of their hands and arms; no cosmetics or washes are so certain and so powerful in their effects: on the contrary, all external applications, unless assisted by internal remedies, are attended with the positive ruin of skin, bloom, and health.

Leathern Breeches.

The compression of tight leathern breeches, however general, is not always equal. Every man may have felt, at some time, a numbness of one or both inferior extremities, from sitting upon a hard seat. This sensation is frequently induced to the same degree by wearing a tight pair of leathern breeches, and remains for many hours after they are drawn off. Elastic leathern breeches frequently cause a numbness and coldness of the external part of the thighs and hips, a painful pressure of the *pudenda*, and are undoubtedly a very improper and injurious article of dress. They are certainly handsome, and very fit to expose a muscular thigh; but they are inconvenient in walking. The most convenient form of this vestment is, on the whole, that of *pantaloons*, if made sufficiently wide, of a thin cooling substance in summer, and of a warm elastic woollen-cloth in winter. Leather is an improper substance for this part of dress; as, on account of it's close texture, it is apt to check insensible perspiration. If the waistband be too strait, the free motion of the internal parts of the abdomen will be obstructed, the absorbent vessels of the intestines prevented from performing their offices, and hypochondraical complaints be easily induced. This inconvenience may be entirely avoided, by the use of *braces*, now almost generally adopted, and which, as they render a tight cincture altogether unnecessary, cannot be too much recommended both to men and women, for the sake of health as well as comfort.

Garters

are worn both above and below the knee: but they are equally improper in both places. They cause a disagreeable appearance and unnatural hardness of the part. They dispose the legs to dropsy, render walking tiresome, and are a very common cause that many stumble, fall, and dislocate or break their knee-pans. Garters are unnecessary to men, except when wide pantaloons are used, and then a good way may be to suspend them by tape to the waist. A still better method, in this case, is to wear a kind of stocking made on purpose, rising about midway up the leg, and of sufficient elasticity to keep up. If females cannot do without garters they should garter loosely below the knee, with worsted stuff, as elastic as posible; but if any contrivance could be adopted in their place, it would amply compensate for any little trouble. The stockings might certainly be easily tied to some tape fastened to the waistband.

Stockings.

There is not a greater and more important emunctory in the whole human system than the feet. The connection between the feet and the head, the stomach, the uterus and the urinary passages is such that fits of the gout, suppressions of the menses, and pains resembling those of the stone, are frequently and almost instantaneously brought on by cold applied to the feet. I am even persuaded, says Dr. Vaughan, that cancer, inflammation, and even abortion are frequently occasioned by wearing cotton and silken stockings. Cotton, like linen, once saturated with the moisture discharged from the feet, can re-

ceive no more: and as it can part with little or none to the atmosphere, the excretion must be more or less impeded, and a sense of coldness and clamminess must be inevitable. Nothing stops the excretion from the feet sooner and more effectually than cold. Nor are facts wanting to convince those who are open to conviction that cotton worn next the skin is a plentiful source of uncleanliness. Let any one desirous to see it proved, wear cotton stockings one day and worsted the next, and afterwards say which was the more free from humidity and smell. Cotton saturated with the sweat of the feet (and cotton can contain more than linen), soon rots. Cotton stockings will not last so long as worsted for this very reason.

Mankind seem ignorant of the calamities which may arise from the spontaneous changes which the sweat of the feet, stagnating in the stockings, undergoes; of the calamities which may arise from the mutual action of the sweat and the leather and it's impregnations. In short, they who wear cotton stockings ought, from regard to delicacy as well as health, to change them once a day.

The use of socks or worsted feet, within cotton stockings would be attended with advantage; or, which is still better, cotton stockings with worsted feet. As to the legs they require no covering; and it would be far better if they were exposed to the air.

It is scarcely necessary to mention silken stockings: they are so thin and such easy conductors of heat, that they are never worn alone by prudent people, but over worsted or yarn. There can be no great objection to this custom.

Altho' the feet are as great and important an emunctory as any in the human body, yet it has never been proposed,

to solicit a discharge from them. On the contrary it has been repeated as a rule, particularly in the polite world, that suppressing their discharge is the most certain and effectual method of keeping them dry and free from smell. Hence old women have set about suppressing the discharge, and an unsuspected fatality must often have overtaken the unwary, who confided in their anile injunctions. Dry feet are preferable to moist; but those means which encrease their perspiration are the only means which can preserve them dry, and prevent their smelling offensively. No person can seriously doubt the importance of a free perspiration from the feet. Keeping them in warm water has frequently removed pains and even inflammations of very distant parts; and a copious discharge from them has in all such cases been known to precede the cure. So that if the pain and inflammation were not caused by suspension of the perspiring faculty of the feet, they were at least certainly cured by exciting or increasing it.

By what change of clothing then are the feet to be kept dry and free from smell? When we run and when we dance, do not our feet perspire much, and do not the feet of some become clammy and offensive after such exercises, within a short time, notwithstanding all their endeavours to prevent it? Our body perspires most when it is driest, and dryness is preserved by wearing such a covering as conveys away the vapour perspired before it has time to condense into a fluid form. Such a covering should be woollen. Therefore if persons wearing cotton, thread, or silken stockings feel a coldness and clamminess, and if their feet exhale a disagreeable smell, it is because their stockings instead of conveying the va-

pour perspired away before it changes it's form, absorb and retain it in contact with the skin, in a heat most favourable to putrefaction, and thus obstruct all future perspiration. Our feet are not as easily kept dry as our bodies; for the vapour of the skin after passing through even worsted stockings, must in some measure be secluded from the atmosphere by the leather of the shoes. Be this as it may, worsted stockings convey the vapour from the feet, and do not readily retain it condensed: so that if the vapour only assume a fluid state, on the outside of the stockings, between them and the shoes, we are at least more likely to feel less coldness and clamminess than if we wore stockings which more readily absorb water than vapour. But the most disagreeable sensation which they ever feel, whose feet sweat, is between the toes. Here it is that the more fluid part of the sweat being absorbed, leaves the gross and glutinous part to accumulate and putrefy. This can only be prevented by presenting even to the skin, between the toes, a woollen covering; in other words, by making our stockings with toes, as we do our gloves with fingers. That the feet are more exposed to the effects of cold, and to stagnations of the fluids, than any other part of the body, is unquestionable: 1st, Because they are the most remote parts from the heart, and the quickness of the circulation of the blood decreases in proportion to that distance; and 2nd, The blood circulating downwards makes it's way to the heart somewhat slower, on account of it's own gravity. By this slowness in the circulation, more watry particles are deposited by the blood. It is therefore necessary to keep the feet somewhat warmer than the rest of the body, in order

to encourage the motion of the fluids to the upper parts. For the same reason, it is proper to prevent all moisture from without, by means of water-proof shoes, provided with cork soles, for the winter, or with elastic socks of horse hair.

Boots,

made too small, and of thick hard leather, are so pernicious to health, and so disagreeable in walking, that it is surprising any sensible being should confine himself in them, for the silly purpose of shewing (as nearly as such an unmanageable material as leather is capable of) the shape of his legs. The effects which they occasion may easily be understood from what has been said, and from what is more to be explained hereafter. The constant use of boots contracts the size of the legs, particularly the calves, as may be observed in military men, and the fashionable loungers of Bond-street, and Pall-mall.

Shoes.

How frequently do we smile at the Chinese, who, from a tyrannical custom, squeeze and compress their feet, that they may remain small and crippled. Yet these feeble Orientals proceed more rationally in this practice, than their European rivals. *They* begin with it gradually, and from the earliest infancy. *We* do not think of contracting the feet of our children, till they have almost attained the natural size, and thus endeavour to counteract the progress of nature, when it is too late to do it with impunity. Our knees would be more flexible, and our toes more pliable, more useful, and better adapted to perform the various motions of the feet, if they were not con-

tinually pressed and palsied by this improper *case*-work. Nature has designed the toes to be as moveable as the fingers. Examine the feet of a peasant's child who has never worn shoes. Instead of the toes being crooked or bent inwards to a point, they are straight as their fingers, and the inner side of the foot forms nearly a straight line from the heel to the tip of the first toe. Those unfortunate beings, who are born without hands, learn to perform with the toes the most astonishing tasks, to write and cut pens, to sew, to draw; in short, to supply almost completely the want of their hands. Our feet would be more comfortable, easy, and useful, if we were not at the greatest pains to deprive them of their elasticity and vigour. The numerous nerves crossing them, in every direction, plainly evince that nature has endowed them with peculiar powers, of which we can scarcely form an adequate conception. Why are mankind determined to convert the natural shape of the foot into a geometrical figure? or why do they not take it into their heads to new-model some other part of the body, which may happen to be irregular in it's form? He who is regardless of the pain and trouble occasioned by warts, excrescences, and callosities of various forms; he who wishes to convert his feet and toes into so many barometers, to indicate the present state, and to foretel the future changes of the weather, will ever agree with his shoemaker, to save as much leather as possible; and he is scarcely to be pitied for his imprudence. But such a person cannot pretend to walk, and if he be unable to provide a horse or a carriage for his excursions, he must submit to abridge himself of many pleasures; and such cessations from exercise are undoubtedly

extremely detrimental to health in general, and they may be registered among the pre-disposing causes of the gout, rheumatism, and dropsy. Many people are thus almost deprived of the use of their legs; and the pain of the more virulent species of corns, as well as of the nails, when grown into the flesh, is excruciating. For these obvious reasons the sole of the shoes ought to be sufficiently broad, and easy; in short, they should be made to the *natural* form of the foot. It is astonishing that mankind, almost with one consent, should determine to become the vassals of fashion. Not long since they deemed the foot handsome when it was compressed by an instrument into a shoe a full inch shorter than is necessary for a free use of the foot; at present, the foot is deemed handsome by being reduced to a narrow and long pointed shape. Instead of bending the toes with their nails inward, they must now be squeezed together so as to lie one over the other. We can scarcely regret that such folly is sometimes rebuked on striking the foot against a stone, if reflections on the evil be induced; but not even punishment can rouse some people to a sense of outrages against common sense and nature. A shoe ought to be made sufficiently long, with thick soles, and the upper-leather soft and pliable. If shoes be deficient in any of these requisites, the skin will be rendered callous; the perspiration indispensable to those parts will be stopped; warts and corns will appear in numbers; the nails will grow into the flesh, and various complicated maladies be produced, which not only affect the feet, but the whole body. Shoes should have low heels; and have the true shape of the foot, which at the toes is broad, the heel small, and

the length of the inside is greater than the outside. They should be made from two lasts, as the shape of the feet indicate. The following figures demonstrate the propriety and necessity of a reformation in the shape of shoes. Fig. 1, is the shape of the sole of a foot not compressed or deformed by small shoes. Fig. 2, shews how the sole of the shoe ought to be formed. Fig. 3, shews clearly that the shoes usually worn, made on one last, do not fit.

Fig. 1.

Fig. 2.

Fig. 3.

Each foot may be placed upon a piece of paper, and it's exact outline drawn with a pencil, after which the lasts may be made, attending carefully to the shape of the different parts of the foot. In taking the size of the sole from the foot, it will be necessary to allow sufficient room for the toes, which are constantly pushed forward in walking, by the bending of the foot. By wearing this kind of naturally shaped shoes, a person will be able to walk with perfect ease, and, of course, a longer time; and corns will be effectually cured or prevented. With respect to the

substance of which shoes should be made, no other general rule can be given, than that it ought to be sufficiently compact, to prevent the water from penetrating; so elastic and soft, as to admit an easy motion of the whole foot; and adapted to the weather, exercise, and soil in which it is to be used. To those who have not the means or opportunity of procuring the patent water-proof leather, the following method of preparing this species of leather may be adopted at a very trifling expense. One pint of drying oil, two ounces of yellow wax, two ounces of spirit of turpentine, and one ounce of burgundy-pitch, are to be carefully melted together, over a slow fire. Those to whom the smell of pitch and turpentine is unpleasant, may add a few drachms of some cheap essential oil, as of lavender, thyme, and the like. With this composition new shoes or boots are to be rubbed, either in the sun, or at some distance from a fire, with a sponge or soft brush: this operation is to be repeated as often as they become dry again, until they be fully saturated. In this manner, the leather at length becomes impervious to wet; the shoes or boots thus prepared last much longer than they otherwise would, acquire such softness and pliability, that they never shrivel or grow hard and inflexible, and thus prepared, are the most effectual preservatives against cold and chilblains.

Advantages to be derived from wearing always one Kind of Covering.

Bears and foxes, which inhabit cold climates, can maintain the natural temperature in all seasons, and be in health and vigour, with one and the same covering; why may not man maintain his natural tem-

perature and remain in health and vigour, with one and the same covering also? There is no season or climate, however warm, in which bears, foxes, and many other animals are not covered with some hair; and it often falls off even in the coldest seasons and climates. It seems natural that the old hair should fall off to make room for new; that the hair should be regenerated as well as the other parts of the body. And the hair being thicker in cold than in warm climates and in cold than in temperate seasons, does not prove than it is unnecessary in warm climates; and much less that any thing better might be supplied. The utmost it proves is that less might suffice. The more obvious advantages to be derived from wearing always one kind of covering may be easily understood from the following considerations. Uneasiness, itching, and pain, most commonly attend the change of one kind of covering for another, even when there is no suspicion of dampness. A skin used to the feel of fine linen cannot bear that of coarse. The brother of Louis XIV, who was secluded from society in the Bastile of Paris is reported to have worn very fine linen, because coarse linen made him uneasy. [Mem. du Marchal Duc du Richlieu, &c.] Ann of Austria was under a similar necessity of wearing fine linen. A skin used to the feel of linen cannot bear, with equal pleasure, the feel of cotton. And flannel, which seems in it's effects most like the hairy covering of animals, is regarded with a degree of antipathy by those who have long accustomed their skin to linen or cotton. Sir Benjamin Thompson says, there is no luxury greater than that of wearing flannel, when one is used to it. [Phil. Trans. v. 77. p. ii. 240.] To change

our apparel as often as the weather changes is attended with a great loss of time, and supposes a fit opportunity, and a certain degree of independence. Such time and opportunity are seldom at the disposal of sailors, soldiers, and husbandmen.

Consider the dormouse: it is so clothed with hair, which slowly communicates heat, that Mr. Hunter could not freeze it, even in a freezing mixture, till he had thoroughly wetted it's hair. [Observ. on certain Parts of the Animal Economy, p. 89.] And if such a reptile as this be qualified, by a covering of hair to maintain a similar degree of heat in all seasons and climates, will my reader believe that man might not also more effectually brave inclemencies of weather if he had such a covering? The practice of wrapping ourselves up in flannel at the approach of winter, changing it for calico at the approach of spring and autumn, and wearing linen only during the summer, is equally absurd aud hurtful; many have fallen martyrs to it; for it prevails equally among the strong and the weak, those of thirty and those of sixty. Besides the temperature is seldom the signal for these changes, it is the day of the month! No man can certainly foretell what covering may be most suitable for to-morrow, and the states of the weather are too inconstant and variable for him to possess a covering proper for every one. People in ease and affluence tell us that clothes should be changed as often as the weather changes, appearing to have only the care of themselves at heart; for poverty will always preclude the labouring poor from the advantages of so frequent a change, provided it be ever so necessary.

On bearing Cold.

It is hoped that men will begin to consider the folly and mischief of a warm regimen, which in health often prepares them for sickness, and in sickness often encreases the disease, and hastens death; a regimen which would be much more proper for one that is to have a sudden passage into a warm country, than for us who are to prepare ourselves for the bearing of cold; an inconvenience we cannot fly from, and therefore ought to accommodate ourselves, and which is neither formidable nor dangerous.

The inhabitants of England formerly went naked, and were more healthy than we are now. The people of Canada, and all the cold continent behind Newfoundland, go much after the same manner, without any inconvenience from it, but are rather fortified against the accidents they would be subject to, if their pores were much opened, and relaxed by too much warmth; and we may readily distinguish the rational from the savage part, by as thin a habit as decency will permit. It is strange that people should be fond of supplying their skins, and keeping their pores too open; as if a man did not really perspire, when there is no sensible moisture upon the skin. If men considered how much sweat impairs the skin, and inclines it to wrinkle, as Sanctorius remarks in one of his aphorisms, they would be fully persuaded that nature can make discharges by finer and better ways than those which are so perceptible, and that flannel is scarcely necessary on this side of old age. The nervous parts of the skin have certainly a very great elasticity, and are capable of being strengthened by good and suitable management,

even to a habit, as well as those of other parts. When the glands of the skin throw out a very sensible quanty of sweat in some particular parts, these parts grow accustomed to the air, or other moisture, and receive little or no hindrance in their discharges from it; as we see the palms of the hands sweat copiously, notwithstanding the external air immediately striking upon them; and none are more strong and healthy than those who are accustomed to have their feet wet, without changing their shoes and stockings. The stomach placed in the midst of the body, and consequently exquisitely warm, is so adapted as to bear large draughts of the coldest liquor without the least danger or inconvenience, unless the body has been extremely heated; and tho' it's office seems to require great and continual heat, yet it is not obstructed in it by the admission of cold things; nor are it's glands benumbed or constringed, so as to hinder the secretion of digesting juices; and can we suppose the fabric of the skin less perfect and exquisite, when by it's position it is to be immediately subject to the effects of the external air? Can we think it's vessels are not endued with a strength sufficient to answer the force and weight of the incumbent air? and it's glands of such a make, as that the particles they strain shall be of so fine a texture, as to pass the skin, when it seems to us to be too close to permit any transition? The effects of too much heat is evident in the maladies of hot countries. Let us instance the disease of the cholic, which, when it seizes any one among us, the chiefest care is to be secured from cold. Now the cholic is the epidemical distemper of hot countries, and so common at Surat, that about noon the whole town will smell of

assafœdita, which they mix in most of their dishes, to preserve them from that tormenting distemper, which the heat of the air (so far from exempting them) renders them liable to, by rarefying the blood and humours, and opening their pores; by which it is probable many among us bring on accidental cholics. When muffs were worn universally, men were accustomed to let them hang upon their bellies. I have heard a healthy man complain, that on leaving off his muff for a day or two he has been griped. Any one in the world will from hence infer, that keeping the part too warm prepared it for the ill effects of the air, and that the same may happen in any part of the body; so that it is folly for people, in most cases, where the lungs are not concerned, to nurse up a distemper, which was at first perhaps in a great part owing to a tender way of life, and by continuing that course, must be increased rather than perfectly rooted out. [Fuller's Medicina Gymnastica.]

Advantages to be derived from a Woollen Covering next the Skin, contended for.

"It is a mistaken notion," says Sir Benjamin Thompson, "that flannel is too warm a clothing for summer. I have worn it in the hottest climates, and in all seasons of the year, and never found the least inconvenience from it." [Phil. Trans. vol. 77.] "And I can aver," says Dr. Vaughan, "that I have worn it several years, in summer as well as winter, in the warmest rooms, and under the most fatiguing exertions, without ever feeling the least inconvenience. Nay, since I have worn it, I have never once felt any complaint in my breast, which I frequently did before. In short, since I have worn it, I have never experi-

enced an hour's ailment. "But why is linen and calico preferred to flannel? We are told, it is because flannel heats more than linen or cotton. Now, it must be allowed it is not the heat of our covering that is ever disagreeable to us, but it's being soaked in sweat and confined next the skin. Did any one ever feel uncomfortable from mere heat? No; he could not: he can only have felt uncomfortable from his wet shirt sticking to his skin. "Flannel is preferable to linen, because with the former we can perspire without danger, and exercise ourselves without any unpleasurable feeling. But who can do so when linen is next the skin? If one dance with flannel next the skin, the perspiration is necessarily encreased, the matter perspired is conveyed through the flannel to the atmosphere, and the skin remains dry, warm, and comfortable. If one dance with linen next the skin, the perspiration is also necessarily encreased, but the matter perspired is not conveyed through the flannel to the atmosphere; much of it being condensed into a fluid state, retained in the linen, and kept in contact with the skin. Here then are two sources of heat, which those who wear flannel next the skin are never subject to; these are the condensation of the vapour of the skin (all vapours in becoming fluid, and all fluids in becoming solid giving out heat) and the greater capacity of linen for heat.

"Suppose, again, that after dancing and perspiring greatly, necessity obliges me to go into the open air. I have done it many times with flannel next my skin; but I never caught cold by it, nor did I feel uncomfortable. And doubtless the reason is because my skin was kept dry by the flannel conveying away the matter perspired, before it lost it's form of vapour.

Suppose after dancing and perspiring freely, necessity should oblige one, with linen next his skin, to go suddenly into the cold air; what will be his sensation! what his risque! His linen will be soaked in sweat, and, like every thing excrementitious, disgustingly stinking; he will feel cold and shiver, his teeth will chatter, and it is a thousand to one but he catches cold; a hundred to one but his lungs become inflamed; for he is subjected to a source of cold, which those who wear flannel next the skin seldom or never are: this is the evaporation of the condensed fluid from their linen, which will be greater in proportion as it is exposed to more wind. "Thus it appears how effectually a covering of wool can defend our bodies from sudden and excessive heat and cold; how exactly it co-operates with the powers of generating heat and cold in living systems, and how constantly it preserves us in that temperature which is most pleasurable as well as most natural and beneficial. "As to the benefits derived from flannel as an electric, I cannot conveniently enlarge on them. [See Brydone's Tour through Sicily, &c.] It must suffice, at present, to have proved that heat and dryness are necessary to perspiration [See Home's Med. Facts and Exper. p. 245]; and that our clothes never feel so pleasant as when the matter perspired and the evaporation from our clothes are in such a given ratio to each other as to preserve us dry."

"Wool," says Dr. Willich, "on account of it's rough surface, is more calculated to absorb infectious morbid matter than a more smooth substance; but we have nothing to apprehend from flannel upon the skin, and under the usual dress. I am rather of opinion, that it is a better preventive against contagion

than any other; because, while it encourages perspiration, it at the same time removes the inhaled poisonous particles, particularly if, in cases of danger, perspiration be increased by other suitable means. Hence people wearing flannel upon their skin, never suffer from cold. I have been informed, that the manufacturers in the different founderies of Birmingham, as well as the iron-works of Colebrook-dale and Kettley, in the most intense heat, wear no other but flannel shirts; and that without these it would be impossible to prevent continual colds, and the most fatal diseases. These advantages strongly recommend the use of flannel to every one anxious to preserve his health, but particularly to those who are exposed to all kinds of weather, as husbandmen, fishermen, mariners, soldiers, and travellers. Those who complain of cold legs and feet, are never comfortable nor healthy: if they could be prevailed on to wear worsted stockings and flannel drawers, they would acquire a quicker circulation of the blood in the lower extremities, and prevent many troubles and indispositions, from which, without this precaution, they cannot escape. By continuing the use of flannel sufficiently long, and changing it frequently, the most obstinate gouty and rheumatic complaints have often been removed, and many other imminent dangers averted. Children afflicted with rickets, cannot be better relieved than by a proper diet, and flannel shirts, which may be daily fumigated with amber, petroleum, or other fragrant substances; a process which has been frequently productive of the most beneficial effects." [Lectures on Diet and Regimen.]

Objections to the foregoing Doctrine.

If an excess of perspiration be induced by warm or stimulant clothing, as by wearing flannel in contact with the skin in the summer months, a perpetual febricula is excited, both by preventing the access of cool air to the skin, and by perpetually goading it by the numerous and hard points of the ends of the wool; which when applied to the tender skins of young children, frequently produce the red gum, as it is called; and in grown people, either an erysipelas, or a miliary eruption, attended with fever.

Shirts made of cotton or calico stimulate the skin too much by the points of the fibres, tho' less than flannel; whence cotton handkerchiefs make the nose sore by frequent use. The fibres of cotton are, I suppose, ten times shorter than those of flax, and the number of points in consequence twenty times the number; and tho' the manufacturers singe their calicoes upon a red-hot iron cylinder, yet I have more than once seen an erysipelas induced or increased by the stimulus of calico, as well as of flannel.

The increase of perspiration by heat either of clothes, or of fire, contributes much to emaciate the body; as is well known to jockies, who, when they are a stone or two too heavy for riding, find the quickest way to lessen their weight is by sweating themselves between blankets in a warm room; but this likewise is a practice by no means to be recommended, as it weakens the system by the excess of so general a stimulus, brings on a premature old age, and shortens the span of life; as may be further deduced from the quick maturity, and shortness of the lives, of the inhabitants of Hindostan and other tropical climates.

M. Buffon made a curious experiment to shew this circumstance. He took a numerous brood of the butterflies of silk-worms, some hundreds of which left their eggs on the same day and hour; these he divided into two parcels; and placing one parcel in the south window, and the other in the north window of his house, he observed, that those in the colder situation lived many days longer than those in the warmer one. From these observations it appears that the wearing of flannel clothing next the skin, which is now so much in fashion, however useful it may be in the winter to those who have cold extremities, bad digestions, or habitual coughs, must greatly debilitate them, if worn in the warm months, producing fevers, eruptions and premature old age. [Darwin's Zoonomia, v. 2. p. 23.] The celebrated Professor Hufeland, lays down the following conditions and limitations, in what relates to the use of flannel. "On the whole," says he, "I am of opinion that it would not be adviseable, at least to children and young persons, universally to adopt a woollen texture for the covering of the skin. It is, however a salutary dress to those who, in all probability, have commenced the second half of their lives; to all cold or phlegmatic temperaments; to all who lead a sedentary life; to individuals subjected to catarrhs, or frequent colds, gout, diarrhœa, and partial congestions of the blood; to all nervous patients and convalescents from severe chronical disorders; to persons who are too susceptible of the impressions of the atmosphere; and, lastly, in such climates and pursuits of life as are exposed to frequent and sudden changes of air. It is, on the contrary, hurtful to all those, without exception, who are already subjected

to violent perspiration, or troubled with cutaneous erruptions, and who cannot afford to change their under-dress as often as is consistent with cleanliness," He also says, in his "Art of prolonging Life," "Warm coverings upon the bare skin are to be recommended only during intense cold, or for weakly people subjected to the rheumatism. In infancy and youth, and for those whose bodies are sound, it is far preferable to wear, next the skin, either linen or cotton, with a vest of the same in summer, and in winter one of woollen." [English translation, vol. 2. p. 241.] In the compiler of this pamphlet is afforded an instance of the pernicious effects of flannel when worn next the skin. Having adopted this kind of clothing for one winter, now fifteen years since, he induced a dry habit, which he has not yet been able entirely to overcome.

THE DRESS OF CHILDREN.

The Children of the Poor and Rich compared.

The dress of our children is void of order and uniformity. It is various and chequered like the whims of their parents. This is very prejudicial: it bewilders them; scatters seeds of confusion in their brain, which spread through life, and gives it the cast of a tragi-comic farce. The children of the rich are clothed sumptuously, and thereby rendered proud and senseless; opinion stifles truth, dress becomes the standard of merit, and the poor man is consequently despised. The children of the poor are huddled up in rags, hardly sufficient to cover their nakedness; the consequence is, they are debased and

abandoned to the contempt of themselves and of others. But tho' the children of the poor are clothed with rags, these rags are expensive from their multiplicity and artificial construction; and this increase of expense is unfavourable to marriage and population. [De la Monarchie Prussiene sous Frederic le Grand, par M. Mirabeau, t. 1. p. 167. 4to.] The cast unclean rags, worn by most of the children of the lower classes of the people, which contain the infectious seeds of many distempers, are the cause of great ill health and mortality among them; thy perpetuate and disseminate epidemic diseases. And while the children of the poor are huddled in rags, the extirpation of the small-pox (and why not the measles, scarlet-fever, hooping-cough, itch, and all other infectious diseases?) so much to be desired, will be impossible.

Close Garments attended with bad Effects.

Our clothes are fetters to the body, the invention of gothic, barbarous ages. In infancy, when the body ought to be freely formed by unconstrained easy movement and play, when man ought to gather strength, flexibility, and firmness, when he ought to be made invulnerable like Achilles, when freedom and gladness ought to be woven into his existence, his clothes impede every natural easy motion. By these fetters children are robbed of their imprescriptible rights to free and unconstrained activity of body, sport, and play; they grow up into beings feeble, sluggish, and awkward in body; little, stupid, unfeeling, and servile in mind. Real activity and industry are to be expected then only, when the human body from it's earliest infancy shall have been

free and unshackled. "Children in general are too warmly clothed, particularly in their earliest infancy. It is much better to inure them to cold than to heat. The former will never hurt them if they be exposed to it from an early period; but the loose and porous texture of their skin, leaving too great an opening for perspiration, subjects them to an inevitable waste of strength and spirits, from extreme heat. Hence it is that more die in August than in any other month of the year. Besides it is evident, on a comparison between the inhabitants of northern and those of southern climates, that mankind grow more robust by supporting excessive cold, than they do by bearing excessive heat. However, as the child grows up, and his fibres gather strength, you should inure him step by step to bear the rays of the sun; provided you advance gradually you may inure him, without risk, to the scorching heat of the torrid zone." [Rousseau's Emilius, v. 1. p. 228.]

On the Causes and Consequences of a too early Secretion and Emission of Semen.

During the first fifteen or sixteen years of life, the testicles ought to receive only so much blood as is necessary to keep open the veins and channels for the future secretion of seed, that the want of blood and warmth in the testicles may prevent the secretion of any seed during childhood. A boy is hardly three years old but he must be a man, he must wear breeches. In his frock the boy was easy, and free to jump and gambol at his pleasure; in his breeches he is, I, Pent up and shackled, and by way of compensation his mind is stuffed with opinion and folly. He bears the burden of his breeches without a mur-

mer, because he is taught to believe his breeches fine, honourable, and manly. 2, During the first and second year the boy can neither button nor unbutton his breeches, and he is continually in a sad condition. 3, To make water he must pull and strain his little pipe to get clear of his breeches; for a year and more he is unable to perform this operation himself; children, maids, and valets, lend their assistance in pulling and playing with his private parts. By this pulling, handling, and playing, the boy (and the girl too who frequently assists, and to whom the innocent boy often tries to return the friendly office), acquire an intimate acquaintance with the genitals. And this is one source of that hurtful practice which Tissot has proved to be so injurious to the human race.

"Nursery-maids, domestics, and others ought to be watched with the utmost care, that they may not foster the first germ of dissipation. I have met with some instances, where children became onanists merely through the nursery-maids, who, when they cried and would not sleep, knew no other method of soothing them than to handle and sport with their privites. The sleeping together of two ought never to be suffered." (Hufeland's Art of prolonging Life, v. 2. p. 161. transl. 1797.] From the third year of his life, sometimes earlier, the boy wears breeches, which in general are made of wool. Every avenue of the beneficent air to the testicles is shut up, they are not cooled, not braced, not quieted. On the contrary, the breeches generate a humid warmth, which is greatest about the private parts, where the shirt convolves, and where all the heat and acrid vapours of the upper and lower parts of the body are concentrated. The heat and vapour about the pri-

vate parts certainly exceed that of the abdomen and thighs by several degrees. The great warmth and humid acrid vapours about the private parts, not unlike a warm, humid, irritating vapour-bath, operating for the long period of eight or ten years, relax and debilitate the solid parts of the testicles, draw the blood and juices (perhaps the nervous fluid) into them, and the relaxed, mollified, dilated, and full-blooded testicles of a well-nourished full-blooded body, instead of being cool and unconstrained, free from irritation and pressure, with little blood in them, are thus heated, pressed, irritated, brooding, and distilling in a warm humid, acrid vapour-bath, and continual hot-house, for the long period of eight or ten years, or to the twelfth year of a boy's life, not less than twelve or fifteen hours every day. Of necessity then there must be a secretion of seed. The breeches therefore are the principal and most powerful cause of the early secretion of seed in the tenth or twelfth, instead of the fifteenth or sixteenth year. And the consequence of this precocity is, that children pollute themselves, that mankind are destitute of vigour and virtue, that man does not stand in his true relation to himself, to the female sex, and to his species; he withers "like the vine, which, having been forced to bear fruit in the spring, languishes and dies before the autumn." From the rock of Elliot to that country where Maupertuis measured the earth, breeches are the general fashion, excepting only the highlands of Scotland. Here from their infancy, instead of breeches, the males wear a sort of petticoat (probably derived from the tunica of the Romans,) which ends above the knee. Their thighs and genitals, like those of the Romans, are bare, and

exposed to the air. It is evident that breeches, by the warmth, vapour, pressure and irritation, which they occasion, must of necessity draw the blood into the testicles prematurely, and that of necessity a premature distillation and secretion of seed must be the consequence. In former ages, breeches were cooler, wider, and more easy than at present, particularly during childhood; children ran half naked and for a longer time in frocks. [Pomponius Mela. I. iii. c. 3.] In former ages children were kept must colder, hardier, and rawer, much more like savages: the brain and nerves were at rest, they grew up in simplicity, modesty, and order, and formed a race much healthier and better than the present. The supposition that our ancestors were perfectly healthy and vigorous, and that the present much decayed generation proceeds from a healthy unimpaired stock, and owes it's imbecility merely to it's own misconduct, is erroneous. The root of the evil lies much deeper, and it may be traced to a long series of generations. The baneful influence of breeches has worked upon the constitutions of our ancestors, notwithstanding all the counteracting severity of their mode of living.

Causes of Ruptures.

Dr. Faust estimates that France has 43,000 parishes, which in general consist of two or three villages.

That 3 ruptured males to each parish is 129000
400 large towns at 20 each is - - - 8000
1600 small towns at 10 each is - - - 16000
153000

We shall be enabled to ascertain by a comparison of the number of inhabitants, the proportionate number

of ruptured males in England. Thus France, on the authority of Guthrie, contains twenty-five millions of inhabitants, and England seven millions. In this proportion there are 42840 ruptured males in England! Women are likewise subject to ruptures, but the number of ruptures among women is to that among men as one to twenty-five. A very great and striking difference! The reason is, that the groin and abdomen of the woman are kept much cooler than those of the man, with whom the heat and vapour, created by the breeches from his earliest infancy, soften, debilitate, relax, and dilate, the muscles and aponeuroses, by which the abdominal rings are formed. The supposition of the harder labour of the men being the cause of this striking difference is in a great measure erroneous; for many women undergo hard labour as well as the men; through the greatest part of France they carry astonishing weights, even upon their heads, by which the abdominal ring might easily suffer; probably one half of all the ruptures are occasioned by sudden violent concussions, such as coughing, sneezing, falling and the like, to which women are as liable as men, besides the dangers of child-bearing and high-heels, which are peculiar to the sex.

Ruptures then, with all the miseries they entail on the human race, are in a great measure also to be attributed to the wearing of breeches *in the years of infancy.* If we be perfectly moderate and indulgent, and place only two thirds of the whole number to the score of breeches (in which case the proportion of female to male ruptures still remains as one to eight and a third), there will be in England no less than 31980 ruptured miserable human beings, in one generation, 6400 of whom die in the greatest torments,

victims to the practice of wearing breeches in their infancy. The idea of steering a middle course, by giving thinner and wider breeches to children, and those some years later than usual, would be unfortunate. Even wide breeches of linen or cotton create warmth, pressure, and irritation, and exclude the all-powerful influence of the cooling, soothing, invigorating air. By covering and buttoning up the private parts of children they are considered in good custody, the main point of education is neglected, and the child ruins itself. Away then with the breeches of children! Some time must elapse, before the weakness of the abdominal rings, brought on by breeches, transmitted by propagation (probably to the female sex also); and increased by both, through a series of generations, can subside, and before the abdominal rings can recover their natural tone and vigour. It must be made a point of manners that children, particularly boys, are not to touch their private parts. The general introduction of this custom will be easy. "I put a boy," says Dr. Faust, "of three years, who had already worn breeches for some time, into a frock. At first he touched his private parts frequently; I forbade it seriously and watched him. The open air, cooled, soothed, and strengthened his private parts and he overcame his bad habit entirely."

Caps,

or something like them, are fixed upon the heads of our children soon after birth, and made to bind the external ear closer to the skull than it was ever naturally intended. Mothers and nurses think nothing more unbecoming an infant than prominent ears; and

ladies are in general so averse to them that they hide them as a deformity. Hearing is lessened by flattening the ears. Nature seems to have made the human ears moveable, like those of dogs, horses, &c.; otherwise why are they furnished with muscles. For tho' the number of the muscles of the external ear be different in different subjects; yet there never was a subject in whom there was not some, as well belonging to the whole external ear as to it's several parts.

Miscellaneous Hints on the Dress of Children.

The dress of children ought to be wholesome, cheap, free, easy, open, cool, and simple. The wise and excellent abbot Barthelemy says of the Lacedæmonians, "Their dress consists in a tunic, or kind of short shift, and a robe which descends to the heels. The girls who are obliged to employ every moment of their time in wrestling, running, leaping, and other laborious exercises, usually only wear a light garment without sleeves, which is fastened over the shoulders with clasps, and which a girdle prevents from falling below the knee. The lower part is open at each side, so that half the body is naked. Lycurgus could not subject the girls to the same exercises as the men without removing every impediment to their motions. He had, no doubt, observed that man did not cover himself till after he was become corrupted, and that his garments multiplied in proportion to his vices: that the charms, which seduce him, frequently lose their attraction by being constantly exposed to his view, and that, in fine, the eyes only defile those minds which are already defiled. Guided by these reflections he undertook by his laws to establish such a harmony of virtues between the two sexes, that the

temerity of the one should be repressed, and the weakness of the other supported. Thus not contented to decree the punishment of death against him who should dishonour a maiden, he accustomed the youth of Sparta to blush only at vice. Modesty deprived of a part of it's veil was respected by both sexes, and the women of Lacedemon were distinguished for the purity of their manners. I may add that Lycurgus has found partisans among the philosophers. Plato in his republic would have the women of every age follow their exercises in the Gymnasium, with no other garments than their virtues." The Romans went with their arms naked, and they held it indecent to cover them with sleeves. [Aulus Gellius, 1, vii. v. 12.] The old Germans also went with their arms naked. The Lacedemonians, as mentioned by the Abbot Barthelemy, observed the same rule, and Ellis says of the Indian women of Hudson's Bay, "the sleeves of their upper habit are frequently separated from the body, and taken on and off at pleasure, being only tied with strings at their shoulders; so that their arm-pits, even in the depth of winter, are exposed to the cold, which they reckon contributes to their health." [Voyage to Hudson's Bay, p. 186.]

Agreeably to the reasoning pursued in the former pages, the following peculiar, uniform, equal dress for children of both sexes, is proposed.

1, The head and neck uncovered, the breast open, the hair cut short all round, without curls and powder. 2, A wide shirt not extending beyond the knees, open at the breast down to the stomach, with a collar falling backwards, the sleeves of equal width, ending above the elbows, neither tied nor but-

toned, but open, so as to give the air free access to the upper part of the arm-pit, and breast.

3, In summer, a wide frock to be worn over the shirt. This properly constitutes the dress, and has the following immutable form. About the neck and breast it is cut out wide, with a slit down to the stomach, buttoned with three buttons. It has no slit or opening at the sides. A great deal may be said against pockets for children in general, but if pockets are to be allowed they must be on the outside, by no means on the inside of the frock. The sleeves end above the elbow, they must be wide and open, for the same reasons which have been given in the second article. The arm, the chief instrument of man, must be kept quite free and unconstrained, perfectly accessible to the air, from which it is to derive health and vigour. The frock must not exceed three inches in length below the knee. Behind it must be cut open, so as not to create the least obstruction in walking or jumping. The extremities of the frock may be bound, and doubled in, so as to admit of being let out, according to the growth of the child. The materials may be linen, cotton, or silk. Undoubtedly it would be best, if the free open garments of children did not end below but above the knee: the tunica of the Romans ended above the knee, and the Romans were good judges of propriety and decency.

4, In winter, an additional frock of the same form, made of wool or cotton, may be worn under the other. 5, The stockings must end below, not above the knee, that the knee may be free and naked, invigorated by the influence of the air. In summer it is best for children to go without either shoes or stockings. Clothes should not be dried in

stoves or ovens, where the steam cannot ascend as in a chimney, because they become tainted with corrupt air. "The practice of putting many clothes upon children, indulging them in sitting over the fire, sleeping in warm rooms, and perserving them from being exposed to the various inclemencies of the weather, relaxes their bodies and enervates their minds. If children, along with such an effeminate education, are pampered with animal food, rich sauces, and such other diet as overcharges their digestive powers, they become sickly as well as weak. All that class of diseases which arise from the catching of cold, or a sudden check given to perspiration, is found only among the civilized part of mankind. An old Roman or an Indian in the pursuits of war or hunting, would plunge into a river while in a profuse sweat, without fear or danger. A similar hardy education would make us all equally proof against the bad effects of such accidents. The greater care we take to prevent catching cold by the various contrivances of modern luxury, the more we become subjected to it. We can guard against cold only by rendering ourselves superior to it's influence. There is a striking proof of this in the vigorous constitutions of children braced by the daily use of the cold bath; and still a stronger proof in those children who go thinly clad and without stockings or shoes in all seasons and weathers. Nature never made any country too cold for it's own inhabitants. In cold climates she has made exercise and even fatigue habitual to them not only from the necessity of their situation, but from choice, their natural diversions being all of the athletic and violent kind. But the softness and effeminacy of modern manners has both deprived

us of our natural defence against the disease most incident to our own climate, and subjected us to all the inconveniences of a warm one, particularly to that debility and morbid sensibility of the nervous system, which lays the foundation of most of our diseases, and deprives us, at the same time of the spirit and resolution to support them. These few observations are selected from a great number that might be mentioned, to prove that many of the calamities complained of, as peculiarly affecting the human species, are not necessary consequences of our constitution but entirely the result of our own caprice and folly in paying greater regard to vague and shallow reasonings, than to the analogous constitutions of other animals. If we would inquire into the cause of our weak and sickly habits, we must go back to the state of infancy. The foundation of the evil is laid there. There is the highest probability that if we led natural lives, we should retain to the last the full exercise of all our senses. There is no reason to doubt but it is in the power of art to protract life even beyond the period which nature has assigned to it." [Dr. Gregory's Comparative View, discourse i.]

The Power of Habit instanced.

Numerous instances might be adduced of the power of habit in forming the health and vigour of the human constitution. But they would swell the size of this tract unnecessarily. Besides, if the reasoning already produced proves ineffectual in reclaiming men from ridiculous and silly customs, no example whatever can influence. We beg leave, however, for the sake of those who are capable of admitting the truths of fact and experience, to give a recent in-

stance, in the person of JOHN HOWARD, as related by Mr. Pratt, who, after a life devoted to the assistance of the most miserable of the human kind, whom he sought in recesses where they are seldom looked for, died at Cherson, in Russia, Jan. 20, 1790, aged about 63, the victim of a disease, the ravages of which he was exerting every effort to restrain.

"He was singular in forming many of the habits of his life; particularly in the use of damp sheets, linen, and clothes. Both in rising and going to bed, he swathed himself with coarse towels dipped in the coldest water he could get; in that state he remained half an hour, and then threw them off, freshened and invigorated. He never put on a great coat in the coldest countries; nor had been five minutes under or over the time of an appointment, so far as it depended on himself, for six and twenty years. He never continued at a place, or with a person, a single day beyond the period prefixed for going; and he had not for the last sixteen years of his existence ate any fish, flesh or fowl; nor sat down to his simple fare of tea, milk, and rusks, in all that time. His journies were continued from prison to prison, from one group of wretched beings to another, night and day; and where he could not go with a carriage he would ride, and where that was hazardous he walked. Such a thing as an obstruction was out of the question. Some days after his first return from an attempt to mitigate the fury of the plague in Constantinople, he favoured me with a morning visit in London. It rained torrents, and the wet dripped from every part of his dress like water from a sheep landed from it's washing, He would not even have attended to his situation, having sat him-

self down with the utmost composure, and began conversation, had I not made an offer of dry clothes, &c. "Yes," said he, smiling, "I had my fears, as I knocked at your door, that we should go over the old business of apprehensions about a little rain water, which tho' it does not run off my back, as it does from that of a duck, goose, or any other aquatic bird, does me as little injury; and after a long drought is scarcely less refreshing. The coat I have now on has been as often wetted through almost as any duck's, and, indeed, gets no other sort of cleaning. I do assure you, a good soaking shower is the best brush for broad cloth in the universe. You, like the rest of my friends, throw away your pity on my supposed hardships with just as much reason as you commiserate the common beggars, who, being familiar with storms and hurricanes, necessity and nakedness, are a thousand times, so forcible is habit, less to be compassionated than the sons and daughters of ease and luxury, who accustomed to all the enfeebling refinements of feathers by night, and fires by day, are taught to feel like the puny creature stigmatized by Pope, who shivered at a breeze. All this is the work of art, my good friend; nature is more independent of external circumstances. Nature is intrepid, hardy, and adventurous; but it is a practice to spoil her with indulgencies, from the moment we come into the world. A soft dress, a soft cradle, begin our education in luxuries, and we do not grow more manly the more we are gratified: on the contrary, our feet must be wrapped in wool or silk, we must tread upon carpets, breathe, as it were, in fire; avoid a tempest, which sweetens the air, as we would a blast that putrifies it, and guarding

every crevice from an unwholesome breeze, when it is the most elastic and bracing, lie down upon a bed of feathers, that relax the system more than a night's lodging upon flint stones. I am a living instance of the truths I insist on. A more "puny whipster" than myself, in the days of my youth, was never seen. I could not walk out in an evening without being wrapped up: If I got wet in the feet a cold succeeded; I could not put on my shirt without it's being aired; I was, politely enfeebled enough to have delicate nerves, and was occasionally troubled with a very genteel hectic. To be serious, I am convinced that what emasculates the body debilitates the mind, and renders both unfit for those exertions which are of such use to us as social beings. I, therefore, entered on a reform of my constitution, and have succeeded in such a degree, that I have neither had a cough, cold, the vapours, nor any more alarming disorder, since I surmounted the seasoning. Prior to this I used to be a miserable dependent on wind and weather; a little too much of either would postpone, and frequently prevent, not only my amusements, but my duties; and every one knows that a pleasure or a duty deferred is often destroyed. Young has justly called procrastination the thief of time. And if pressed by my affections, or by the necessity of affairs, I did venture forth in despite of the elements, the consequences were equally absurd and incommodious, not seldom afflictive. I was muffled up even to my nostrils; a crack in the glass of my chaise was sufficient to distress me; a sudden slope of the wheels to the right or left set me a trembling. Mulled wines, spirituous cordials, and great fires were to comfort me and keep out the cold, as it is called, at

every stage: and if I felt the least damp in my feet or other parts of my body, dry stockings, linen, &c. were to be instantly put on; the perils of the day were to be baffled by something taken hot going to bed, and before I pursued my journey the next morning, a dram was to be swallowed to fortify the stomach. In a word, I lived, moved, and had my being so much by rule, that the slightest deviation was a disease. Every man must, in these cases, be his own physician. He must prescribe for, and practise on, himself. I did this by a very simple, but, as you will think, very severe regimen; namely, by denying myself almost every thing in which I had long indulged. But as it is always much harder to get rid of a bad habit than to contract it, I entered on my reform gradually; that is to say, I began to diminish my usual indulgences by degrees. I found that a heavy meal, or a hearty one, as it is termed, and a cheerful glass, that is to say, one more than does one good, made me incapable, or at best, disinclined to any useful exertion for some hours after dinner; and if the diluting powers of tea assisted the work of a disturbed digestion, so far as to restore my faculties, a luxurious supper comes so close upon it that I was fit for nothing but dissipation, till I went to a luxurious bed, where I finished the enervating practices, by sleeping eight, ten, and sometimes a dozen hours on the stretch. You will not wonder that I rose the next morning with the solids relaxed, the nerves unstrung, the juices thickened, and the constitution weakened. To remedy all this, I ate a little less at every meal, and reduced my drink in proportion. It is really wonderful to consider how imperceptibly

a single morsel of animal food, and a tea spoonful of liquor deducted from the usual quantity daily, will restore the mental functions without any injury to the corporeal: nay, with increase of vigour to both. I brought myself, in the first instance, from, dining on many dishes, to dining on a few, and then to being satisfied with one; in like manner, instead of drinking a variety of wines, I made my election of a single sort and adhered to it alone. My next business was to eat sparingly of that adopted dish and bottle. My ease, vivacity, and spirits augmented. My clothing, &c. underwent a similar reform; the effect of all which is, and has been for many years, that I am neither affected by seeing my carriage dragged up a mountain, nor driven down a valley. If an accident happen I am prepared for it, I mean so far as respects unnecessary terrors; and I am proof against all changes in the atmosphere, wet clothes, wet feet, night air, damp beds, damp houses, transitions from heat to cold, and the long train of hypochondriac affections. Believe me, we are too apt to invert the remedies which we ought to prescribe to ourselves; thus, we are for ever giving hot things when we should administer cold. I am satisfied that if we were to trust more to nature, and suffer her to apply her own remedies to cure her own diseases, the formidable catalogue of human maladies would be reduced to a third of their present number. Dr. Sydenham, for example, I think, reckons sixty different kinds of fevers; of these I cannot suppose less than fifty are either brought about, or rendered worse by misapplication of improper remedies, or by our own violation of the laws of nature. And

the same may be said of other disorders." [Pratt's "Gleanings in Wales," &c., vol. i.]

CONTENTS.

On the Custom of wearing Clothes, - - - page 5
On the Materials of Dress, 6
On covering the Head, - 8
Neck Bandages, - - - 12
Coat and Gown Sleeves, &c., - - - - - - 15
Stays, Waistcoats, &c., - 15
Gloves, - - - - - - 17
Leathern Breeches, - - 18
Garters, - - - - - - 19
Stockings, - - - - - 19
Boots, - - - - - - 23
Shoes, - - - - - - 23
Advantages to be derived from wearing always one Kind of Covering, - - 27
On bearing Cold, - - - 30
Advantages to be derived from a woollen Covering next the Skin, contended for, - - - - - - 32
Objections to the foregoing Doctrine, - - - - 36

THE DRESS OF CHILDREN.

The Children of the Poor and Rich compared, - 38
Close Garments attended with bad Effects, - - 39
On the Causes and Consequences of a too early Secretion and Emission of Semen, - - - - 40
Causes of Ruptures, - - 43
Caps, - - - - - - - 45
Miscellaneous Hints on the Dress of Children, - - 46
The Power of Habit instanced, - - - - - 50

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